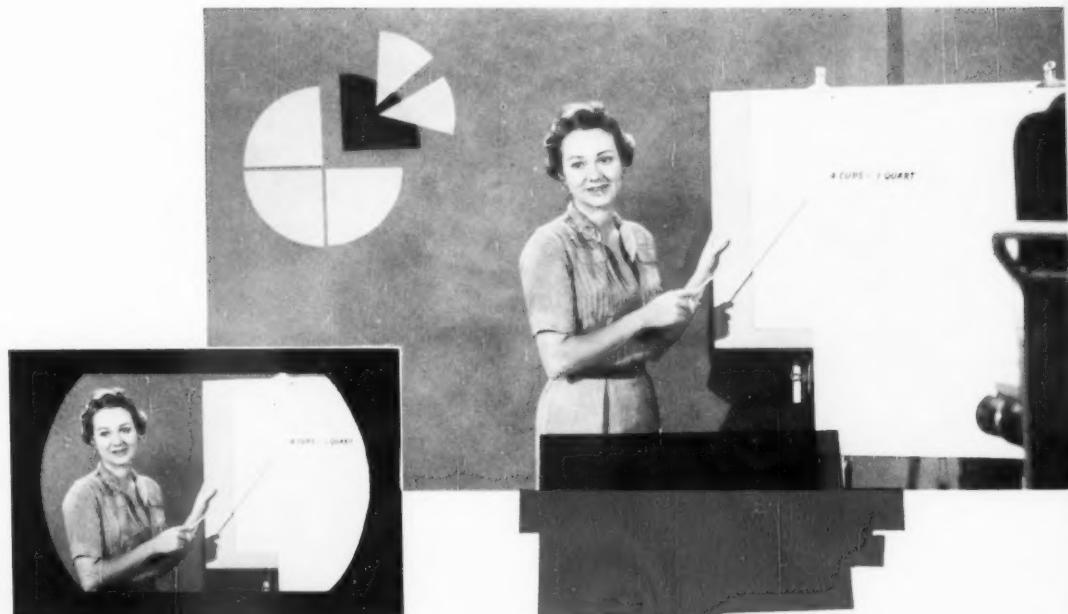


FEBRUARY, 1959

**the
AMERICAN
SCHOOL
BOARD
JOURNAL**

**ETV: five
years after**

What you should know when
you plan your ETV station...
(see page 32)



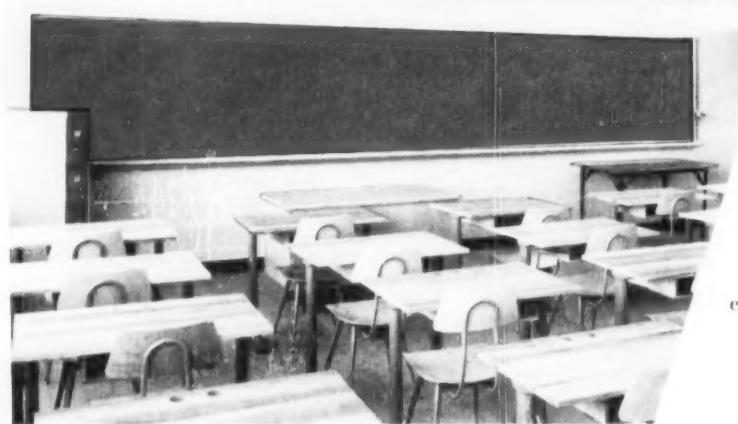
Claridge

Chalkboard & CORK Bulletins

QUALITY...
PERMANENCY
at LOW COST

HILLCREST High School, Springfield, Missouri

Architect: Richard P. Stahl,
Springfield, Missouri



● NEW!

Full Color Catalog

Larger, many real colors, more detail. Get Catalog No. 329 to help you solve replacement, remodeling, or new building problems. You'll find much helpful information.



CLARIDGE continues to modernize and improve chalkboard and bulletin board manufacturing in step with new educational demands. 36 years experience concentrated on ONE purpose: the FINEST chalkboards and bulletin boards with greatest educational value. Schools and architects around the world name CLARIDGE to define their standard of quality.

- 1 Duracite Chalkboards in Seven Colors
- 2 Grapholite Chalkboards
- 3 Claridge Factory Built Chalkboards and Bulletin Boards
- 4 Asbestocite Chalkboards
- 5 Claridge Washable Chalkboards
- 6 Horizontal Sliding Chalkboards
- 7 Vertical Sliding Chalkboards
- 8 Vitracite Porcelain Enamel Chalkboards
- 9 Claridge Reversible Chalkboards and Bulletin Boards
- 10 Durasteel Chalkboards in Seven Colors
- 11 Extruded Aluminum Display and Trophy Cases
- 12 Fabricork Fabric Surface Bulletin Boards
- 13 Extruded Aluminum Bulletin Board
- 14 Claridge Swing Leaf Display Boards
- 15 Extruded Aluminum Chalkboard and Corkboard Trim

Claridge PRODUCTS and Equipment Inc. HARRISON, ARKANSAS				
<input type="checkbox"/> Please send catalog				
<input type="checkbox"/> Send samples or additional data on items circled below:				
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
Name _____				
School _____				
Address _____				
City _____ Zone _____ State _____				



Pneumatic Controls Keep Costs Down, Assure a Better Classroom Climate

Healthful, comfortable thermal conditions help provide a highly efficient learning environment in the Laura Wilder Elementary School, Sioux Falls, South Dakota.

A Johnson Pneumatic Temperature Control System continuously and accurately matches the supply of heat and outdoor air for ventilation to the needs of the students. A thermostat on the wall of each room gives the flexibility necessary to meet the individual comfort

requirements of all rooms.

Besides assuring comfort, such precise regulation eliminates wasteful overheating and allows important fuel savings. What's more, pneumatic controls compound the savings in other, *exclusive* ways. Power consumption, for example, is but a fraction of that used by other types of controls. Pneumatic systems also are simpler, easier to understand and operate and require less supervision and maintenance than anything else you can use. And there is no planned obsolescence to contend with . . . pneumatic controls outlast them all. Given reasonable care, you can expect a Johnson System to last for the life of the building.

The specialist Johnson organization offers you nearly 75 years' experience in making and installing specially engineered control systems for schools. When you build, ask your consulting engineer, architect or local Johnson representative about the unmatched comfort and economy features of Johnson Pneumatic Controls. Johnson Service Company, Milwaukee 1, Wisconsin. Direct Branch Offices in Principal Cities.



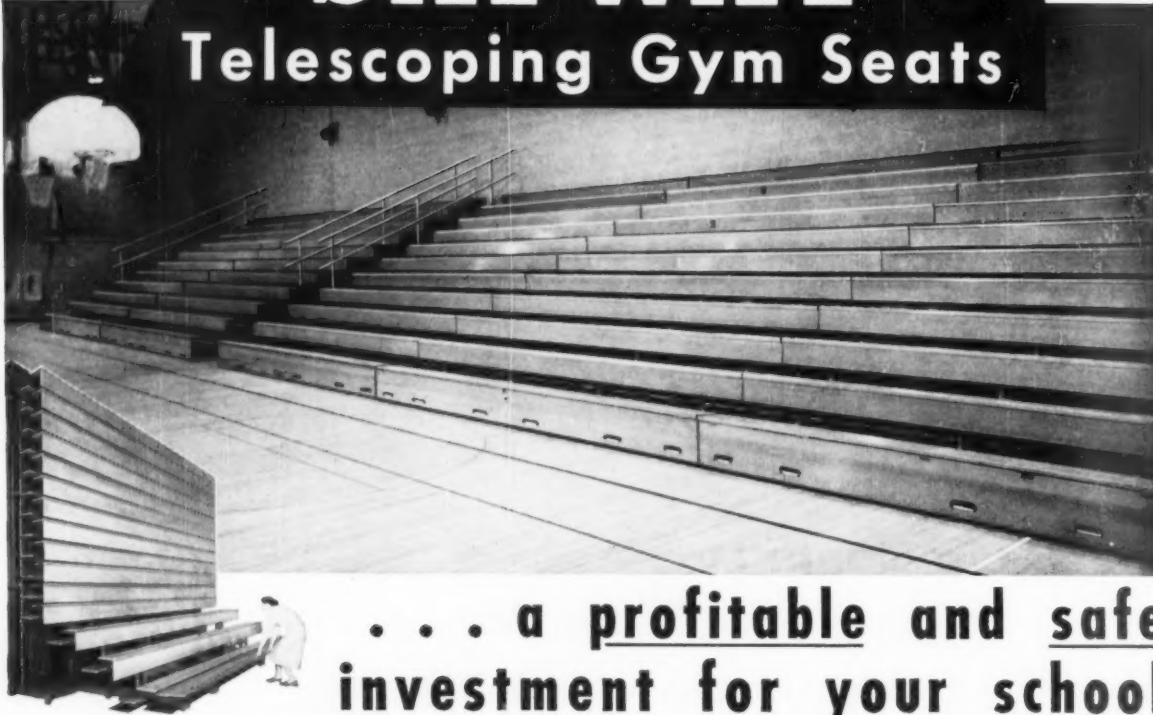
See • Learn • Compare
at the AASA Exhibit
Atlantic City, Feb. 14-18

JOHNSON CONTROL
PNEUMATIC SYSTEMS
DESIGN • MANUFACTURE • INSTALLATION • SINCE 1885



SAFWAY

Telescoping Gym Seats



... a profitable and safe investment for your school

YOU'LL GET profitable *full-time use* from your gymnasium—planned or existing—when you install Safway telescoping bleachers.

With the seats extended over the floor, you provide superior vision and comfort for spectator events such as basketball. Nest the seats back into their "cabinet" and you instantly clear the floor for daily gym work.

And with only one or several rows locked open, you can set up convenient sideline seating for athletic practice, dancing parties or other gym floor activities.

Safway's advanced gym seat design also gives you these important benefits:

SAFE AUTOMATIC LOCKING

Safway's exclusive gravity latch automatically locks each row in relation to every other row (see three photos below).

(1) **LOCKING OPEN.** As each row is extended, latch drops behind lock bar on carriage ahead to prevent movement between rows.

(2) **RELEASING LATCH.** After unlocking the cylinder lock, pushing seats inward forces tapered end of latch against unlocking bar, raising notched front end and freeing row ahead.

(3) **LOCKING SHUT.** With all rows nested, brake pads are lowered and hooks engage brackets on unlocking bar.



Ask for engineering help!

Submit your seating requirements for recommendations by experienced Safway engineers. There is no charge for this service. And write today for your free copy of the new Catalog 162.



SAFWAY
STEEL PRODUCTS, INC.
6232 W. State St., Milwaukee 13, Wis.

February, 1959

the
**AMERICAN
SCHOOL
BOARD
JOURNAL**

EDITORIALS

- 50 The Price of Excellence**
- 50 Written School Board Policies**
- 50 Better Classroom Planning**

FEATURES

- 19 Tips on Learning the Boardman's Job, Fitton**
- 20 A Weekend, Board-Administrator Workshop, Jordan**
- 24 Problems in Teacher Utilization, Kowitz**
- 27 Curriculum Is News, Taylor**
- 29 Everyday Law for the Administrator, Stumpf**
- 32 Cincinnati's Adventure Into ETV, Curry**
- 49 The Financial Accounting Handbook, Baughman**
- 67 School Law: Abuse of School Board's Discretionary Authority, Roach**

WORD FROM WASHINGTON

- 35 School Participation in Implementing Title III, Exton**

SCHOOL BUILDING

- 41 The Devon Elementary School, Opdyke**
- 44 The Hillcrest High School, Glazier**
- 48 Electric Heating and School Design, Smith**

DEPARTMENTS

4 Your JOURNAL for February	62 New Books
8 Surveying the School Scene	72 New Products
13 Association News	79 Reader's Service Section
55 Personal News	



OUR COVER . . .

The television teacher on the cover has become an integral member in the Cincinnati, Ohio, school family. An important three-part report on this district's use of ETV for direct instruction (for the first part, see page 32) details what you should know as you consider an ETV station in your schools.

A review of your JOURNAL for February (pg. 4) →

WILLIAM C. BRUCE, Editor

Published on the 25th of the month preceding the date of issue by THE BRUCE PUBLISHING COMPANY, 400 North Broadway, Milwaukee 1, Wisconsin. CENTRAL OFFICE: 20 North Wacker Drive, Chicago 6, Illinois. EASTERN OFFICE: 233 Broadway, New York 7, New York.

THE AMERICAN SCHOOL BOARD JOURNAL, A Periodical of School Administration, February, 1959, Vol. 138, No. 2. Copyright, 1959, by The Bruce Publishing Company. — All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second-Class Mail Matter, March 17, 1891, at the Post Office at Milwaukee, Wis., under the Act of March 3, 1879.

do you want

FREE

information, catalogs, etc. . . .

about any of the products and services offered
by the advertisers in the JOURNAL?

For the latest information on seating, gym seats, school buses, unit ventilators and controls, classroom windows, and many other products, our advertisers offer a wide variety of product catalogs, informative bulletins and demonstrations. This is the best way for you to "shop from your desk" when you're confronted with school building and equipment problems.

Here's how you can get this information through Reader's Service Section. Each advertiser is listed in alphabetical order, on the last page of your JOURNAL, and is preceded by a code number. To receive information from a specific firm, circle the corresponding code number on the adjacent post card. You may circle as many code numbers as you like on each card. Print your name, address, etc., on the card, tear it out and mail. No stamp is needed; we pay the postage.

As soon as we receive your card, we'll forward your request to the advertiser. We send your request only to the advertiser whose literature you want! You'll receive your booklet or other service in a short time.

That's all there is to it!

Using the Reader's Service Section saves you time, eliminates stamps. "Reader's Service Section" means quicker service for the product information you want — all without cost or the slightest obligation to you!



Your JOURNAL for February

For the newer board member, your JOURNAL for February includes one of the best orientation courses — in capsule form — that we've ever read. "Tips on Learning the Boardman's Job" (pg. 19) offers in several minutes' reading time five brief but vital hints on how to improve a board member's contribution to his schools — and avoid a lot of headaches later on in his career.

Also in this issue you'll find another article on honing board efficiency in a discussion (pg. 20) of a novel approach to handling the myriad of major and minor policy decisions, in addition to those endless "nuisance" details, that pile up to plague every board of education. In Highland Park, Mich., the board and their administrators roll up their collective sleeves and "hole up" all weekend long, workshop-conference style.

The results, as reported in the article with many other details about the conference, are encouraging. Long periods of uninterrupted discussion facilitate more decisions than could be made in a year's monthly evening meetings. Read about this solution to an important problem and determine if the idea could be adapted in your community!

Other areas of thought in your JOURNAL this month: (1) a basic discussion of the principles of business law that are applied everyday in managing the schools (pg. 29); (2) to use teachers most effectively in your district, you must understand the issues involved in teacher utilization and our comprehensive discussion (pg. 24) presents many of the issues; (3) how electric heating, one of the rising stars in classroom construction, affects school design is discussed by an outstanding Michigan architect (pg. 48).

These are, as always, the highlights. We hope that you'll have a chance to page through the issue and read what interests you most — only don't forget the regular departments.

for March...

Dr. Owen J. Cook of the Concord, Calif., schools asks a stimulating question in your JOURNAL for March: how can we save money in administering our schools? You'll find that his answers to this question comprise exceptionally enlightening reading.

The Editor

SUBSCRIPTIONS. In the United States, Possessions, and Canada, \$4.00 a year, payable in advance. Two-year subscriptions will be accepted at \$6.00. In all foreign countries, \$5.00, two years at \$8.00. Single copies, 50 cents.

DISCONTINUANCE. Notice of discontinuance of subscription must reach the Publication Office in Milwaukee at least 15 days before expiration date.

CHANGE OF ADDRESS. When you have a change of address kindly report it to us at once. Send us your old as well as your new address and be sure the Postmaster is notified. Postal regulations restrict forwarded service on magazines to two issues only.

EDITORIAL MATERIAL. Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited and will be paid for upon publication. Contributions should be mailed to Milwaukee direct and should be accompanied by return postage if unsuitable. The contents of this issue are listed in the "Education Index."

A simple case of arithmetic

**LATH +
PLASTER
= SAFETY**

The rocklike, solid and seamless surface of a Genuine Plaster wall is its own assurance of fire resistance . . . may provide the critical margin of safety in an emergency . . . spells budget safety too, because it's easiest to repair, can be washed without damage by soap, detergent or steam . . . will give a lifetime of durable, economical service.

GENUINE LATH AND PLASTER
your surest safeguard against disaster is . . .

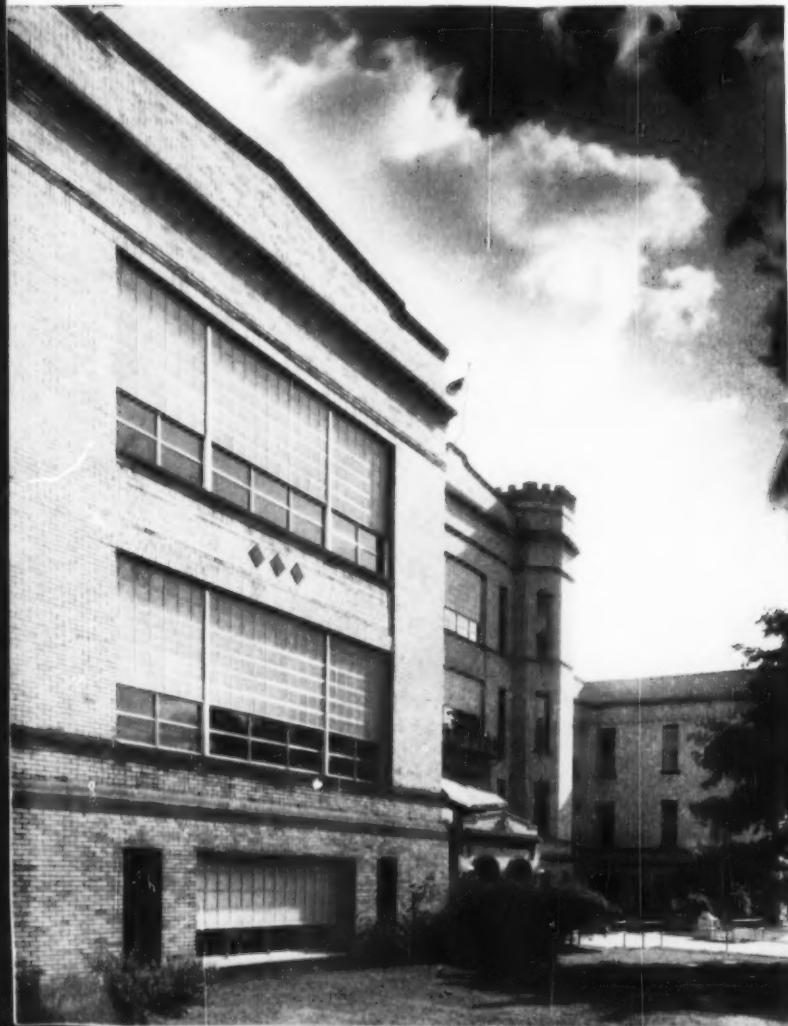
KNOCK ON THE WALL

SOUTHERN CALIFORNIA PLASTERING INSTITUTE
315 West Ninth Street, Los Angeles 15, California

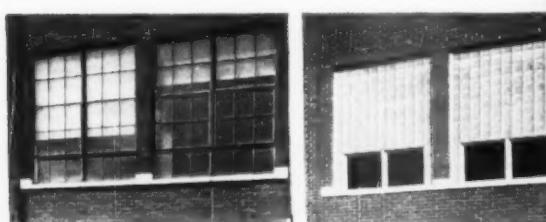




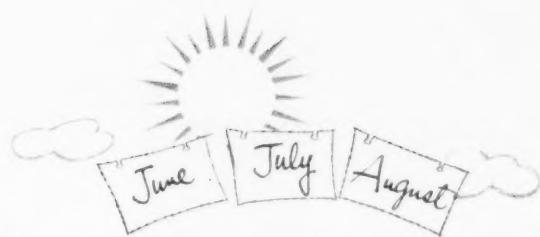
"NO MAINTENANCE PROBLEMS," says Fr. John Ferring, St. Margaret Mary School, Chicago, *seven years* after replacing old windows with glass block. "We're very happy with the results. Glass block have given our school a modern look and improved daytime lighting. There have been no maintenance problems whatsoever."



"REMARKABLE IMPROVEMENT," says W. L. Jefferson, supt. of schools, New Kensington, Pa. (Interior of school above, exterior at left.) "From the standpoint of insulation, appearance, better light distribution and ventilation, our new glass block windows made a remarkable improvement . . . Everyone is delighted with the job."



BEFORE AND AFTER close-up look at an actual sash replacement is shown here. Rusting window sash were replaced with glass block, eliminating painting, old-fashioned shades and high fuel bills.



Plan now for summer modernization

**SAVE MONEY... BEAUTIFY YOUR SCHOOL
WITH OWENS-ILLINOIS GLASS BLOCK**

Hundreds of school administrators across the country have found that replacing worn-out windows with Owens-Illinois Glass Block offer these advantages:

1. No window sash rotting and rusting
2. Lower fuel and light bills
3. Better daylighting

4. Less window breakage
5. Modern appearance
6. Better ventilation

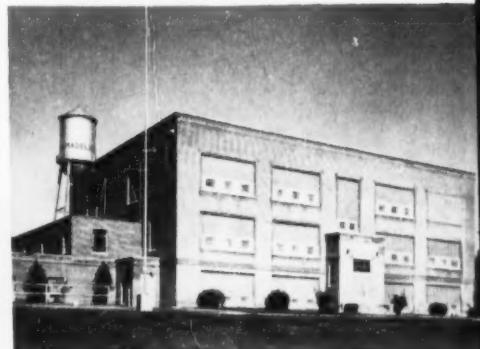
Read how these advantages of glass block have helped administrators of the typical schools, pictured here, save maintenance money and, at the same time, beautify their schools.



NO RUSTING OR ROTTING can occur when you replace worn-out sash with glass block. See how modern-looking this old school in Springfield, Ohio, has become merely by using glass block.



"**BETTER LIGHT, LESS BREAKAGE,**" says Ass't Supt. of Schools Edward L. Murdock, Highland Park, Michigan, referring to glass block modernizing in this school, built in 1917.



"**EASIER, CHEAPER TO HEAT,**" says Supt. J. R. Jansen, Madelia, Minn. "Our school is easier to heat, retains temperature longer. This means a savings in heat costs."

Give your old school a "look" as modern as this new school in Arlington County, Va., by remodeling this summer with Owens-Illinois Glass Block.

For complete information on the money-saving benefits of this daylighting material, write today to: Kimble Glass Company, subsidiary of Owens-Illinois, Dept. AS-2, Box 1035, Toledo 1, Ohio.



OWENS-ILLINOIS GLASS BLOCK
AN PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO

WHICH SCIENCE EQUIPMENT?

How to achieve best design and versatility today?

How to provide maximum flexibility and long life to meet future need?

Can we do it within a limited budget?

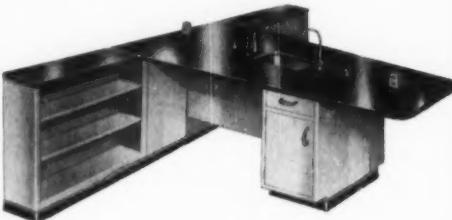
Good, farsighted questions... and METALAB has straightforward answers to make your planning easier than you ever thought possible. METALAB, foremost manufacturers and engineers of scientific laboratory furniture equipment, offers you helpful planning and advisory services without obligation.

HERE ARE THREE UNITS FROM A COMPLETE METALAB LINE TO MEET EVERY REQUIREMENT OF THE SCHOOL LABORATORY:

Economy, Versatility, Advanced Design, Long Life.

**7000 Series ▷
Multi-Purpose Tables**

These units were designed so that Wall Base Cabinets and Storage Units may be combined into one integral group. This permits many students to work efficiently in a limited area. Open and Closed Storage Units can be interchanged with a variety of Base Cabinets.



**▷ 5000 Series
Student Science Desks:**

These units are ideal for a 4-Student-4-Class arrangement. Each student has easy access to all service fixtures, and is provided an individual drawer. The unobstructed working surface and handy notebook compartment allow for better experimental student work.



**8000 Series ▷
Labmaker Service Center:**

This Laboratory Service Center has a fixed fittings service center with water, electric, gas, and air fixtures. Portable METALAB classroom tables may be moved or removed for demonstrations, experiments, and recitations.



METALAB HAS AVAILABLE A COMPLETE LINE OF SCHOOL LABORATORY EQUIPMENT & FURNITURE IN METAL & WOOD!

- Instructors and Students Desks
- Chemistry, Biology and Students Tables
- Open and Closed Type Chemical Fume Hoods
- Storage Cases and Cabinets
- Home Economics Equipment
- Sectional Storage Units
- Radioactive Equipment
- Special Laboratory Fixtures and Fittings
- Acid-Proof Sinks
- Dark Room and Developing Tables.

We would appreciate your writing to Dept. A for any information you desire on laboratory equipment. Our comprehensive catalogs on School Laboratory equipment will be sent to you promptly.

METALAB Equipment Company

DIVISION OF NORBUTE CORPORATION

240 Duffy Avenue

HICKSVILLE, LONG ISLAND, NEW YORK

Surveying the School Scene

NEW YORK FIRE LAWS

In New York, N. Y., under new fire and safety regulations, the principal or person in charge of every school must see that daily inspections for fire and safety are carried out and that prompt correction of violations or hazards are made.

Principals are instructed that pupils may not be permitted to carry classroom waste materials, or empty milk containers into the boiler rooms. Such materials must be collected in covered metal containers and disposed of by the custodial staff.

FEDERAL AID FOR CLINTON

The Anderson County, Tenn., school board will receive a federal grant of \$45,510 to help rebuild the Clinton High School which was dynamited several weeks ago. In the application for federal funds, Anderson County board members estimated the new high school building will cost approximately \$250,000.

1959 SCHOOL CONSTRUCTION

Spending for new construction is expected to rise seven per cent to a record \$52.3 billion in 1959, thus passing the \$50-billion mark for the first time, according to outlook estimates prepared jointly by the Departments of Labor and Commerce. About \$48.8 billion of expenditures are in sight for 1959.

Public expenditures are expected to provide the major part of the 1959 expansion in new construction — rising by \$2.1 billion to \$17.1 billion outlay for public schools will continue to show only a small gain. Second only to highways in the dollar volume put-in-place, schools should reach the \$3 billion level for the first time.

SPUR VOCATIONAL EDUCATION

U. S. Commissioner of Education Lawrence G. Derthick recently announced approval of plans and allotment of federal funds for vocational education programs in 14 states to provide training in skills important to national defense.

The new vocational education programs are designed to provide more and better trained technicians in electronics, atomic energy, instrumentation, tool design, aviation, and industrial chemistry. Courses in these and other technical subjects will be established for both young people and adults.

Congress authorized an appropriation of \$15 million in matching funds for the current fiscal year for the vocational education programs, and appropriated \$3 3/4 million to get them started.

THE SCHOOLS IN 1958

The NEA's annual inventory of the state of the schools showed that, in the beginning of this school term:

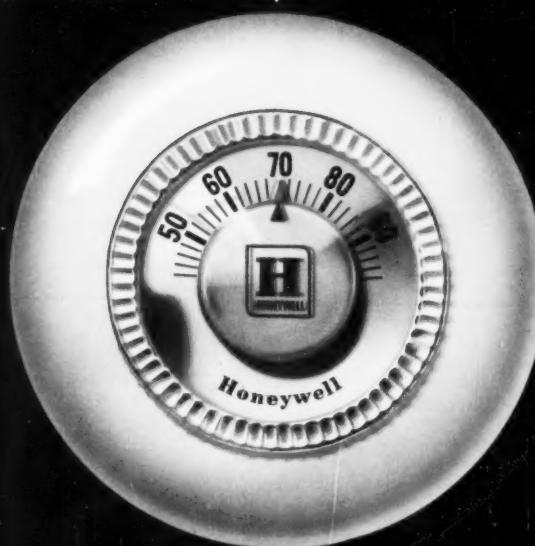
1. Over a million more students — 34 million total with 24.3 million in the elementary school and 10.3 million in high schools.

2. Current expense per pupil in average daily attendance averages \$340 — a 4.9 per cent increase over last year.

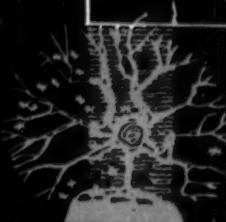
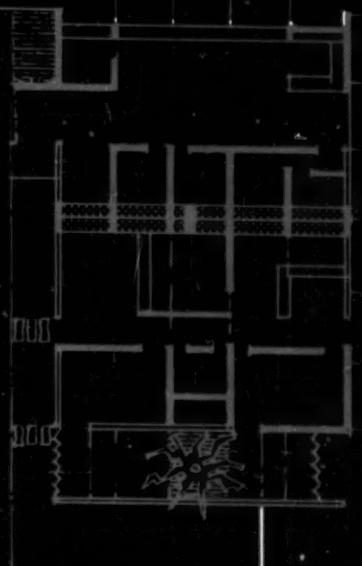
3. Average classroom teacher salary of \$4,775 — an increase of 4.5 per cent. There are now 1,291,929 classroom teachers — up 4.4 per cent.

(Concluded on page 60)

presenting
the
very finest
school
thermostat

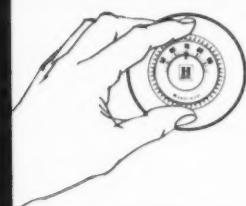


The Honeywell Pneumatic Round



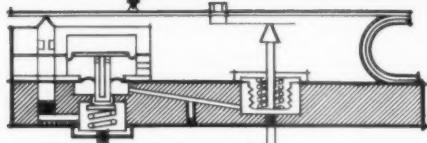


Why the Honeywell is the finest thermal



EASY TO USE

Just turn the dial. That's all you do to set the *exact* temperature you want on the Honeywell Pneumatic Round. The desired setting may be locked in place, to prevent tampering by students.



INGENIOUS CONCEPT

The Pneumatic Round makes new use of the force-balance principle—provides an automatic self-check on each change in control signal. This results in the smoothest, most accurate system response.

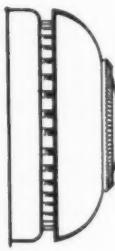
PRECISION COMPONENTS

ASSURE TOP QUALITY

PERFORMANCE

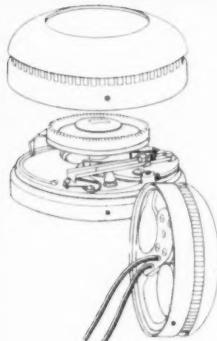
"Classroom comfor

Pneumatic Round stat for every classroom in your school



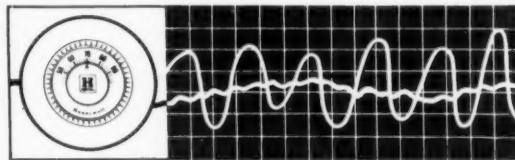
PRACTICAL, MODERN DESIGN

A durable metal cover guards the Honeywell Pneumatic Round against shock or tampering. The grille encircling the thermostat protects the inner parts, yet allows free air flow for accurate temperature reading.



MECHANICAL SUPERIORITY

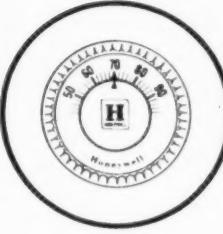
Numerous engineering improvements make The Honeywell Pneumatic Round easy to install—easy to maintain. It is mechanically superior in every detail.



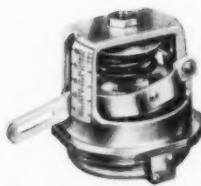
SHARP SENSITIVITY

The Honeywell Pneumatic Round is the fastest responding thermostat on the market. It responds almost *instantly* to any change in room temperature. This assures fast, accurate temperature control.

ARRESTING BEAUTY



The Pneumatic Round was designed in the studios of Henry Dreyfuss, world renowned industrial designer. The bronze metal cover of the thermostat may be removed and painted, to fit any color scheme.



MO516 Damper Motor controls unit ventilator damper. Diaphragm construction reduces friction, stops sticking, aids modulating action of control team.



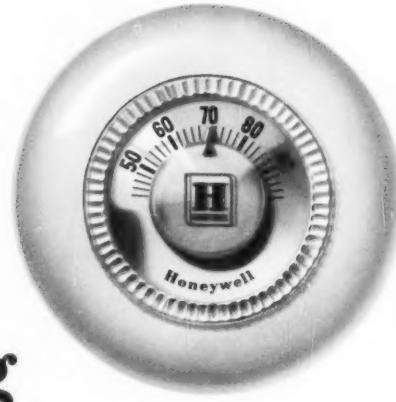
VO512A Unit Ventilator Valve regulates hot water or steam flow. Diaphragm and Teflon cone packing give smooth modulation throughout the valve travel.



LO907 Air Stream Thermostat has fast response, fewer moving parts. Working with room thermostat, it resets the air temperature delivered by the ventilator.

means more take home learning"

The Honeywell Pneumatic Round is outstanding



- in every way • Gives exact temperature reading • Delivers exact temperature set
- Responds instantly • Precision accuracy •
- Rugged and tamper-proof • Easy to see and set
- Dust and dirt proof • Decorative beauty •
- Conveniently located • Precision components

Only a thermostat on the wall can sense temperatures the way an occupant does

Feature for feature the Honeywell Pneumatic Round Thermostat is superior in every detail. For complete information, telephone your nearest Honeywell office. Or write: Minneapolis-Honeywell, Minneapolis 8, Minnesota.

Efficient Honeywell Service and Maintenance available throughout United States and Canada

Convenient, economical Honeywell service assures continued maximum efficiency of all automatic control equipment. Maintenance and service facilities are available through Honeywell branch offices in 108 key cities in the United States—15 in Canada.

Honeywell



First in Control

ASSOCIATION NEWS

AASA ELECTS CONNOR

Forest E. Connor, superintendent of schools in St. Paul, Minn., is the 1959-60 president-elect of the American Association of School Administrators. He will serve as president for year starting March 15, 1960. Dr. Connor won the presidency in a close contest with Benjamin C. Willis, general superintendent of schools in Chicago, and J. Chester Swanson, professor of education at the University of California at Berkeley.

Dr. Connor has been superintendent of schools at St. Paul since 1949, previously serving as superintendent at Kenosha, Wis., and director of secondary education at Hibbing, Minn.

Elected vice-president for a one-year term starting March 15, 1959, was Evart W. Ardis, superintendent of schools at Ypsilanti, Mich. John S. Cartwright, Allentown, Pa., superintendent, was chosen to serve a four-year term on the AASA executive committee.

The AASA convention this year will be held February 14-18 at Atlantic City, N. J., with C. C. Trillingham, superintendent of the Los Angeles, Calif., County schools, serving as president.

DE LA FLEUR APPOINTED

The New York State School Boards Association has announced the appointment of Frederick de la Fleur to the position of director of research. In this capacity Mr. de la Fleur has been educational consultant for the Governmental Statistical Corporation of New York since 1954.

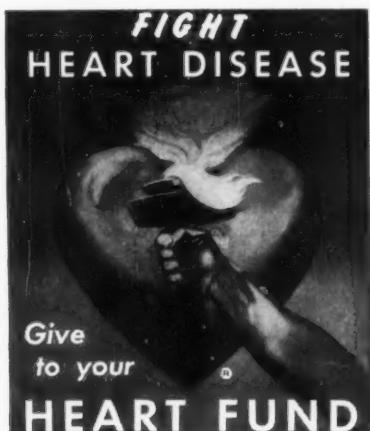
As director of research for the association, Mr. de la Fleur will be responsible for making pertinent studies of school problems, results of which will be made available to local boards for improvement of their schools.

COMING CONVENTIONS

February 3. Missouri School Boards Association, Jesse Auditorium, Columbia, Mo. Secretary: Ben A. Rogers, Eugene, Mo.

February 7-11. National Association of Secondary School Principals, Philadelphia, Pa. Secretary: Paul E. Elcker, 1201 Sixteenth St., N.W., Washington 6, D. C. Exhibits.

February 22-24. Louisiana School Boards Association, Monroe, La. Secretary: Fred G. Thatcher, Box 8986, University Station, Baton Rouge, La. Attendance: 500. Exhibits, educational only.



February 28-March 4. Department of Elementary School Principals, Los Angeles, Calif. Secretary: Robert W. Eaves, 1201 Sixteenth Street, N.W., Washington 6, D. C.

March 1-5. Association for Supervision and Curriculum Development, Cincinnati, Ohio, Netherland Hilton Hotel, Secretary: Rodney Tilliam, 1201 Sixteenth St., N.W., Washington 6, D. C. Exhibits.

March 14. New Mexico Association of School Boards, University of New Mexico, Albuquerque, N. Mex. Secretary: Frank Angel, Jr. Hodgen Hall University of New Mexico, Albuquerque, N. Mex. Attendance: 350.

March 24. Kansas Association of School Boards, Hutchinson, Kans., Baker Hotel. Secretary: Dr. O. K. O'Fallon, 232 Summit, Manhattan, Kans.

TEACHER GROUPS ASSAILED

The teaching profession was accused of sometimes sabotaging improvement in the schools by Henry Toy, Jr., president of the National Citizens Council for Better Schools, as he spoke before a regional meeting of the New York State Teachers Association. "It has not always been the public that has rejected change in schools," Mr. Toy said. "On occasion the profession itself has dragged its feet and sabotaged attempts at innovation."

WALK-TOP surfaces are real Life Savers*



*By permission of Beech-Nut Life Savers, Inc., for candies

On playgrounds and other surfaced areas, Laykold® Walk-Top has proved safe and resilient, with truly "life-saving" qualities.

Over any sound and stable pavement base, Walk-Top provides a smooth, long-wearing surface seal that extends the life of the base. And because it is non-abrasive, it reduces skins, "burns" and other injuries normally associated with play-yard falls and tumbles.

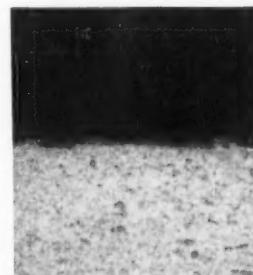


Call our office nearest you for full information on Walk-Top today. Our Laykold Engineers will welcome an opportunity to give you the full "Walk-Top/Life Saver" story.

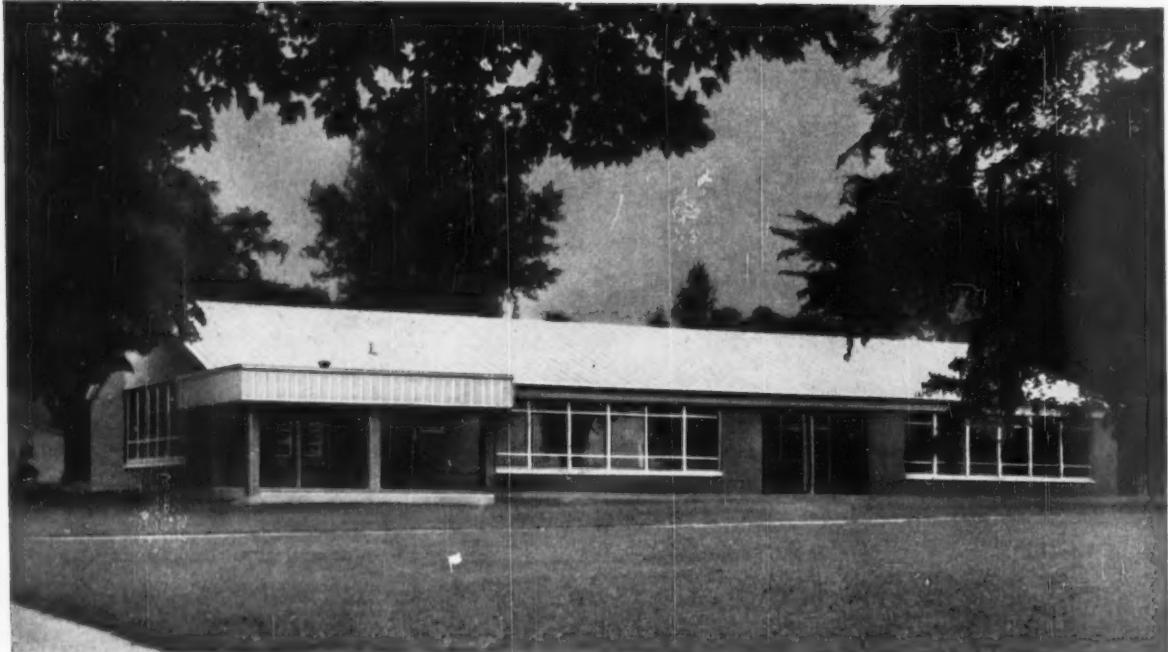


**American Bitumuls
& Asphalt Company**

320 Market, San Francisco 20, Calif. Perth Amboy, N. J.
Baltimore 3, Md. St. Louis 17, Mo. Cincinnati 38, Ohio
Mobile, Ala. San Juan 23, P. R. Tucson, Ariz.
Inglewood, Calif. Oakland 1, Calif. Portland 8, Ore.



Here you see, close-up, a comparison between an ordinary road-type surface before (below) and after application of Walk-Top. Smooth, resilient and safe, Walk-Top is a real Life-Saver for the pavement, as well as for play shoes and clothes. Holds "skinned knees" to a minimum, too.



An elementary school located in Holton, Michigan



Cartwright Elementary School No. 3 Phoenix, Arizona

One system of building created both of these schools on modest budgets

In spite of the vast difference in outward appearance, the schools above have one thing in common. They both provide much-needed classroom space at a cost-per-pupil that other quality building methods cannot match.

How is this possible? The answer is simple. Both schools were created with the Butler Building System—the lowest-cost way to build well.

Mass-produced Butler components were used to form the basic structures. This saved much routine engineering time and costly custom-fabrication.

The simple, functional lines of these basic Butler structures make it possible to create an architectural

treatment as modern or as conservative as you wish. Buildings can be completed with brick, block or any other material your budget or your desire dictates.

And, thanks to Butler's clear-span, rigid frame design, interiors are free of columns or overhead trusses. This permits maximum flexibility in planning classroom arrangements.

The Butler Building System has helped communities all over the country build better schools on modest budgets. For full details on the modern way to build, contact your Butler Builder. He's listed in the Yellow Pages of your phone book under "Buildings" or "Steel Buildings." Or write to us directly.



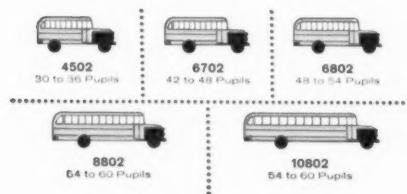
BUTLER MANUFACTURING COMPANY

7311 East 13th Street, Kansas City 26, Missouri

Manufacturers of Metal Buildings • Equipment for Farming, Dry Cleaning, Oil Production and Transportation, Outdoor Advertising • Custom Fabrication
Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Atlanta, Ga. • Kansas City, Mo. • Minneapolis, Minn. • Chicago, Ill. • Detroit, Mich.
Cleveland, Ohio • Pittsburgh, Pa. • New York City and Syracuse, N.Y. • Boston, Mass. • Washington, D.C. • Burlington, Ontario, Canada



No route's too rugged for CHEVROLET SCHOOL BUS CHASSIS!



Visit the Chevrolet exhibit at The American Association of School Administrators Convention, Feb. 14-18 at Atlantic City.

Hills . . . washboard roads . . . traffic-choked city streets . . . you name the problem-spots along your school bus routes. This 1959 Chevrolet will take them in stride—with an eye to the budget in the bargain!

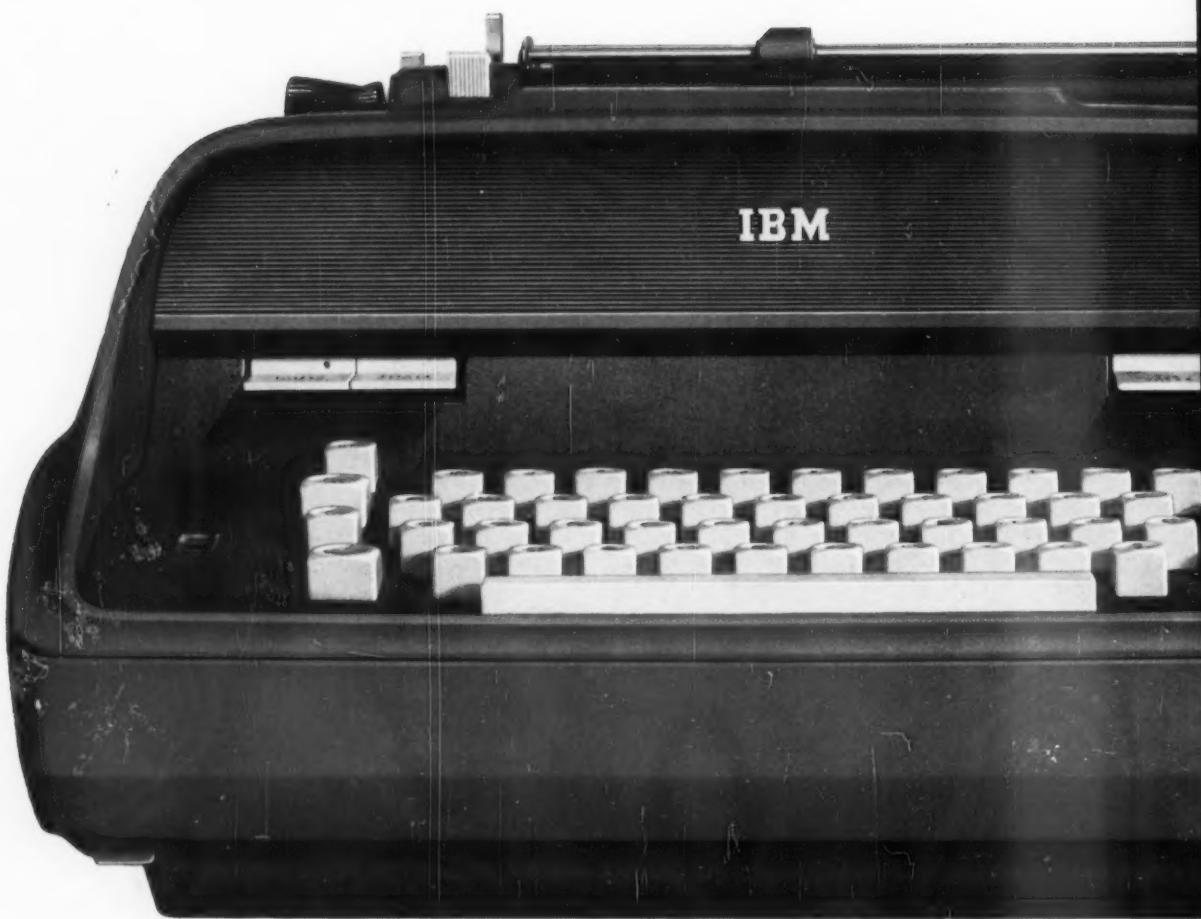
Want a hint of Chevy's dependability and performance? Just match this latest in a line of traditionally robust chassis with National School Bus Standards. You'll find that Chevrolet meets *all* standards—and far outstrips minimums in such vital areas as axle capacity, power-to-weight ratio, electrical capacity and grade-climbing ability.

As for the price tag attached to this kind of reliability—well, your nearby Chevrolet dealer will be happy to demonstrate Chevy's knack for stretching budgets, in both first cost and operating cost. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

BEST YET
OF THE
BEST SELLERS!



this



is
the
new

IBM



Electric

...the new look
in typing
efficiency

The low, sleek profile and sculptured lines tell you—this is new. The alive, eager response of the individually adjustable keyboard ...the new IBM 13" Quiet-Glide Carriage that ends the crash of carriage stops ...these and 25 other engineering achievements make teaching easier, help students advance more rapidly. Dependable, easy to maintain—this is the world's finest teaching typewriter.

IBM®

ASPHALT • VINYL • RUBBER • LINOLEUM

**Manufacturers of Resilient Flooring
Recommend Top-Grade Water Emulsion Wax for**

"... greatly improved appearance . . . co-efficient of friction not significantly changed . . . soiling tendency substantially decreased . . . soil removal greatly facilitated . . . pronounced protection against marring of the surface."



Recommended where it means the Most!

In independent laboratory tests, and in actual usage, Hillyard SUPER HIL-BRITE® meets or exceeds these requirements on every point. Approved by Asphalt Flooring Mfrs., Rubber Flooring Mfrs. Assn., and U/L listed as to slip resistance.



For resilient floors you will be proud of, choose the one highest grade water emulsion finish of them all. On every Super Hil-Brite label you'll find —

"WAX CONTENT—100% PURE NO. 1 PRIME YELLOW CARNAUBA"

This statement on the label guarantees SUPER HIL-BRITE to be the finest wax product available.

Importers recognize Hillyard as the largest importer of prime grades of Carnauba for commercial floor treatments. Only the very top grade is used in the manufacture of SUPER HIL-BRITE. Yet, because it wears 3 to 4 times as long as ordinary wax and is

easier to maintain, SUPER HIL-BRITE is actually less expensive.

Natural or synthetic, there is no substitute for genuine Carnauba.

Ask the Hillyard "Maintainer"® for expert advice on treatment and maintenance of your floors. He can suggest modern, streamlined work methods that mean real savings in your maintenance budget. He's "On Your Staff, Not Your Payroll"



ST. JOSEPH, MO.
San Jose, Calif.
Passaic, N. J.

Branches and Warehouses in Principal Cities



MAIL THIS COUPON TODAY

HILLYARD St. Joseph, Mo. Dept. E-1

Please send me free literature about Hillyard SUPER HIL-BRITE finish for resilient and other floors.
 Please have the Hillyard Maintainer demonstrate SUPER HIL-BRITE on my floors. No charge or obligation!

Name.....

Firm or Institution.....

Address.....

City.....

State.....

**the
AMERICAN
SCHOOL
BOARD
JOURNAL**

February, 1959

- Study all the board's written policies
- Obey the rule of channeling actions
- Don't predict, as an individual, how the board will act on any matter
- Use board-patron committees in an advisory capacity only
- Analyze "last minute" meeting items

Tips...

GARVIN FITTON

Secretary, Board of Education, Harrison, Ark., School District 1

Most of us as school board members probably feel that we are: devoted to the public interest, possessed with sound judgment and discretion, imbued with foresight and breadth of view. In addition, we have a fair knowledge of how to promote effective working relationships.

To these thoughts that we have of ourselves, we, even if we have none of the other viewpoints, must have this philosophy of public education. We must have an unqualified belief in a system of universal public education that will provide an opportunity for every child and youth in the nation—wherever he may live or whoever he may be—to attain the fullest development of his individual potentiality. We must believe in public education without reservation.

These remarks should introduce the subject of "learning the job of a school board member" because without such a philosophy the actions of a school board member are as useless as a bird without wings. Assuming that we are

agreed upon such philosophy we should like to make some observations to those who are neophites on the school board (though the veteran school board member can still learn) on the following topics: establishment of policies, staying in channels, prophesying, committee work, flash items, and evaluation of the school.

1. Written Policies

A board without a clear-cut set of written policies on the important phases of school problems is tossed about by the winds of fate. Such policies fix responsibility, serve as a guide to old and new members, and should cover most fields in the school system. On a minimum basis the following fields should be covered by policies: administration, curriculum, finance, school staff, school plant, and transportation. The objective of policy is to pull together and clarify existing school board rules and regulations; to develop uniform controls in areas where none exist; and to give administration the essential

bases and support for effective operation. Dissemination of policy information should be made to everyone concerned with school operations and should never be allowed to become static. In fact, a yearly review of policy is advisable. The above opinions are based on the assumption that the school board and its individual members have as the primary function the development of policy.

2. Channels for Action

In most jurisdictions the board can act legally only as a unit. Board members have no status as individuals. The board is a policy-forming body, not an administrative one; a superintendent is hired to administer the school. Give him responsibility and stay out of his hair. Don't give orders to school personnel. Don't promise a patron that "the board will do something about it at its next meeting."

Violation of the rule of channeling action results in divided authority and confusion. This is not to argue, however, that the board and its members do not have the responsibility of evaluating the effectiveness of its policy or whether or not its policy is being implemented. Stay in channels and as a board member you will be happier with your "pay" and the administration will be more effective.

3. No Predictions

School board members get calls in which the caller will say: "You just ought to know what is going on down at Central School. As a board member I think you ought to do something about it." The only appropriate answer both as a board member and an individual is: "I'll look into" . . . not, "I'll do something about it at the next meeting." As a board member you cannot

...On Learning the Boardman's Job

be certain as to just how the board will vote on any issue. It is risky to predict. A definite statement that the board will do something about it places the individual on a very shaky limb and indicates a closed mind. Here is where the board's executive, the superintendent, can save both time and trouble. In an administrative matter, he can get the facts, give various analysis of the facts, and enable the board member to make a sound decision. Decisions based on analyzed data may take longer than those based on emotions or opinions, but in most cases in the long haul time and trouble are saved.

4. Use of Committees

The use of committees by the board, whether standing committees or special committees of board members and interested public patrons, seems to be somewhat of a controversial question in educational circles. Trends indicate that school board standing committees are becoming obsolete and that special committees appointed for specific purposes and for specific lengths of time should be used to marshal the resources of many people both within and without the school system. These committees should serve in an advisory and recommending capacity to the board only. Board members may well be chairmen of such committees and committee action should not substitute for board action. Since action and decision is the board's responsibility both legally and morally, emphasis should be made that such committees are merely advisory to the board.

5. Last Minute Items

An ever vexing problem facing the board and its members is that of determining what to do with last minute items not on the regular agenda. Occasionally tempers, time, and trouble will be saved if the following questions are asked and answered immediately: When must this be done? Why should it be done? What is the purpose? Is it covered by policy? Who should act? Answers to these questions should handle the matter at hand quickly.

Honest, impartial evaluation of the school and its problems is a most difficult task but it is a necessary one. It is necessary to provide a basis for sound future action and planning, to establish a broad future plan for the system. To do this evaluation techniques must be developed. An example might be: Do our schools meet the needs of our children? To make proper evaluation of this question, the board needs to consider such factors as: statistics on dropouts and retardation; survey of graduate opinion; frequency of truancy and tardiness; number of discipline cases and rate of staff turnover, etc. ■

Your board stymied with mounting problems that need immediate solutions? Not enough time for careful analysis? The Highland Park, Mich., school board and administrators introduced a successful new "project" to overcome a work backlog and recommend you try —

The School District of the city of Highland Park, Mich., would like to advance for inspection and evaluation a "project" that to us and, possibly to others is quite new. Members of the educational profession may find this new approach to the problems of public school operation both interesting and profitable. A school system is an intricate, demanding master, and those who direct its activities must of necessity understand the diverse ramifications of this public agency. Our new "project" is aimed at improving this level of understanding.

By Way of Background

Highland Park, Mich., is a community of about 40,000 people, entirely surrounded by the city of Detroit. Like all modern school systems we have many problems. Aging buildings, declining revenues, and changing population patterns have pinpointed the need for decisive action by the board of education and the administrative staff. In addition to the staggering burden of external forces, there is the ever present need for internal improvement. Such items as school elections, annual versus semiannual promotions, reorganization of board policy and board regulations, the new administrative structure, a different approach to fiscal policy, conditions of employment, in-service training programs, the extended school year, a revamped building program, salary trends, and curriculum redevelopment — all of these needed the concentrated attention of the board of education if decisions were to be made.

Under normal procedure the board of education of Highland Park meets once a month. At each regular board meeting, time has been set aside for educational presentations which are attempts to clarify for board members

various activities within the school system. The testing program, supervision, the guidance program, the junior college organization, and the teaching of citizenship are examples of the types of presentations which give board members an opportunity to understand, question, and judge the operation of the total school system. During the past year the board held many extra meetings to increase its knowledge of the complex problems with which it was confronted.

We would like to digress for a moment to describe the organizational outline of school administration in Highland Park. The school system is served by six assistants to the superintendent, who are responsible to the superintendent and to each other for the smooth integration of the following divisions: elementary, secondary, junior college, personnel, finance, and special services. We follow, in spite of our limited size, the pattern described quite clearly by Lyndall Urwick in his penetrating article "The Manager's Span of Control" (*Harvard Business Review* of May-June, 1956). In passing may we note that Urwick's major thesis, control limits, has had a profound effect upon the economic life of our nation; many of the major corporations are reorganizing their administrative structures to conform to his ideas.

Time Was of the Essence

This introduction, brief as it is, brings us to the point where we find some road blocks impeding the progress of our school system. The school board was faced with mounting external and internal problems. The superintendent and his staff were confronted with a constant need for evaluation and recommendations to the board which, in spite of its willingness to increase the num-

WILLIAM C. JORDAN

Assistant Superintendent, Elementary Division, Highland Park, Mich., Schools

A Weekend, Board-Administrator Workshop

ber of meetings necessary for intelligent action, does have responsibilities other than those of the school district. Individual board members are busy people who hold responsible positions in the community. Many of them discover that, after all, there is a limit to the given amount of time that can be allotted as a service to the district.

Here was the problem: time was needed for meeting, for understanding, for decisions. By careful analysis it was discovered that if the board met once a week for fourteen weeks, many of the most distressing problems could be solved. However, many of the board members simply did not have that much additional time. Since some decisions could not be delayed for fourteen weeks, a new idea was needed.

Into this vacuum of indecision and hesitancy was injected our "new project." Out of the superintendent's executive committee (composed of the superintendent and his six assistants) by a sort of spontaneous combustion the idea emerged for a *board-administrators week-end workshop to be held at a location away from the city*. The superintendent explained the proposal to members of the board and, in spite of their heavy individual schedules, they accepted the proposal with enthusiasm. It might be well to point out here that Highland Park is served by a dedicated board of education that was willing to sacrifice an entire week end to attempt to solve some of our most pressing problems.

Once the members of the board had indicated their acceptance of the idea, a committee was organized to determine when and where the meeting was to be held. It was decided that the purposes of the conference-workshop could best be served by holding the meeting at a single structure with eating, sleeping,



In Highland Park's board-administrator, weekend workshop, informal atmosphere was conducive to detailed and frank discussion of problems facing the schools.



Consideration of important topics continued through the mealtime "breaks," as Dr. William C. Jordan, assistant superintendent of elementary education discussed a problem at the breakfast table.

and meeting facilities. Such services the committee found could be provided by the Kellogg Center, located on the Michigan State University campus in East Lansing. The quarters provided were ideal. Sleeping facilities were superior, the cuisine was excellent, the meeting room air-conditioned and completely soundproofed. The whole atmosphere was conducive to an orderly business procedure.

Arrangements and Agenda

At the same time that the arrangement committee was at work, an agenda was being formulated. Board members and the executive committee were asked to identify problems which were to be given priority. These items were organized into a printed agenda delivered to all concerned at least four days before departure. Without question the development of the detailed agenda to guide the activity of the conferences

was one of the most important steps taken in the entire process.

The executive committee (the seven school administrators) set some procedural objectives for themselves. It was determined that the superintendent could not by any means carry the burden of the workshop by himself. Such a task would obviously be too great a strain on one individual. By a careful study of the agenda each member of the executive committee became familiar with items involving his division and outlined for himself the contributions he could make at the appropriate time. One does not need to point out here that the greatest contribution of the group process lies in the participation of its members.

With everything in order, with as much preplanning as possible, the total group (seven board members, seven school administrators, and the secretary of the board) 15 in all, departed at

6:00 p.m. for East Lansing. Upon our arrival and after arranging the living quarters, the group met for its first session.

Working Through the Schedule

Any school administrator or school board member looking at the above agenda will recognize immediately the tremendous scope of the prescribed activities. The group immediately concerned with the agenda realized the necessity of moving in an orderly fashion through the defined program. Obviously no lagging was possible. Just as obviously, the group did not want to be hurried — this was the initial reason for the workshop. It was decided that the chairmanship of the workshop should be rotated among board members with sessions limited by recess periods. It was also determined that once a subject was brought under consideration, it was to be concluded either

the workshop agenda

(Friday, Sept. 5, 1958)

9:00 p.m.
Conference Room

- I. *Board Organization and Policy*
 - A. Board Procedures
 - 1. Review, Board Regulations
 - 2. Summary, Administration Organization
 - 3. School Staff and Board Meetings
 - 4. Evaluation
 - B. Board Attorney
 - 1. Functions and Duties
 - 2. Attendance at Board Meetings
 - 3. Method of Payment
 - 4. Procedure for Appointment
 - C. Election (School Board Members)

10:30 p.m. Adjournment

1:30 p.m.

Conference Room

- D. Guidance and Counseling

- E. Calendar Change

- 1. Extended School Year
- 2. Continuous Plant Use

- F. Schedules for Changes

III. Building Program

- A. Review, Previous Program
- B. Priorities, Building Needs
- C. Fire Marshal's Recommendations

3:00 p.m. Recess

3:15 p.m.
Conference Room

- D. Financial Requirements

- E. School Program and Urban Redevelopment

5:00 p.m. Adjournment

6:00 p.m. Dinner
(Private Dining Room)

IV. Current Costs

- A. Salary Trends
- B. Operation and Maintenance
 - 1. Repairs
 - 2. Renovation

8:30 p.m. Recess

8:45 p.m.
Conference Room

V. Proposed Elections

- A. Timetables
- B. Amount of Requests

9:45 p.m. Adjournment

(Saturday, Sept. 6, 1958)

9:00 a.m.
Conference Room

- D. Fiscal Policies
 - 1. Budget Administration
 - 2. Purchasing Policies
- E. Personnel
 - 1. Conditions of Employment
 - 2. Student Teachers
 - 3. In-Service Education, Policies and Procedures

10:15 a.m. Recess
10:30 a.m.
Conference Room

- II. *Educational Objectives*
 - A. Educational Organization:
 - 1. 8 — 4 — 2
 - 2. 6 — 3 — 3 — 2 (Junior High)
 - 3. Annual Promotions
 - B. Junior College
 - 1. Future Enrollment Policy
 - C. Curriculum Change and Development

11:45 a.m. Adjournment
12:00 noon Lunch

9:00 a.m.
Conference Room

VI. Open Session

- A. Conclusions and Postponed Problems
- B. Additional Matters for Discussion

10:30 a.m. Recess
10:45 a.m.
Conference Room

(Discussion continued)

12:00 noon Adjournment
(return to Highland Park)

Some conclusions about Highland Park's weekend workshop- conference:

- 1. The limiting time element of normal board meetings, which smother discussion and understanding, was absent.**
- 2. The feeling of co-operation and common purpose increased between board members and the professional staff while harmoniously working and living together.**
- 3. During the 24-hour period an unprecedented amount of work was accomplished as there was no need to stop to review what was discussed during previous meetings.**
- 4. This method (a weekend, workshop-conference, away from interruptions) was extremely fruitful in terms of ideas, outcomes, and understanding and each participant was pleased with the results.**

by arriving at a decision with which all could agree or by dropping the matter entirely until further study of additional facts could be made.

Those who have worked in any capacity with group-study-discussion methods know, of course, that all subjects under discussion cannot be resolved in entirety. However, when the group arrived at a final conclusion, when all the evidence was in, and when a decision was possible, a resolution was developed to be placed on the agenda of the next formal board meeting. It must be noticed that from a legal standpoint this workshop-conference was not an official board session, it was preparatory only. While the committee chairman tried to enforce the time schedule set up, the group did deviate. For example, recesses were called on time, but discussion continued in the halls, at mealtime and in the living quarters. Also, although the evening limits were listed as 9:45 and 10:30 p.m., at no time did the activity stop at these scheduled moments. Everyone went right on thinking and talking about pertinent problems of immediate interest. Some sessions continued until well after midnight.

The solutions to the questions plaguing the School District of the city of Highland Park, Mich., are certainly of no great interest to the individual reader. However, some conclusions concerning the workshop-conference may be significant to school boards and educators throughout the nation.

1. Unquestionably, frustration was eliminated. The limiting time element of normal board meeting, which smoth-

ers discussion and understanding, was absent. While during the three-day conference time was important if work was to be accomplished, the group was not "nagged" by the clock. Board members could approach each problem from many angles and take time to arrive at decisions.

2. The feeling of co-operation and common purpose increased between individual board members and between board members and the professional staff. Working together and living together developed a harmony of action and solidarity that was both noticeable and profitable.

3. An unprecedented amount of work was accomplished. In actuality this was a 24-hour board meeting. At no time did the group need to stop to review, as is usually necessary when weekly or bimonthly meetings are held. Time was saved by continuous discussion.

4. In evaluating the results of our activity each participant indicated that while some reservations originally might have been held about the feasibility of such a concentrated session, everyone was pleased with the final outcome. It is not an exaggeration to intmate that preceding the week end each participant resolved privately to do all he could to insure a successful workshop.

5. Those of the group who participated felt that this method (a week-end workshop-conference, away from interruptions) was so fruitful in terms of ideas, outcomes, and understandings that we wholeheartedly recommend this new approach to school board problems to school board members and to educational administrators. ■



Two board members, Mr. T. G. Daines and Mrs. Helen S. Field, work on a resolution during a workshop break.

Problems in Teacher Utilization

A basic discussion of problems
in one of the really vital areas of education:
how to utilize teachers most effectively—

G. T. KOWITZ

Division of Research, University of the State of New York

In recent years, problems of teacher utilization have attracted increasing attention. As a result, school personnel are being faced with a rather strange type of question. These problems represent a revival for re-examination of matters that for many years have been handled through administrative decisions based upon traditions or deductions from partial and inaccurate information. It would seem that accepted, routine practices are no longer able to resolve adequately these problems. Changes in the expectations of the people, the demands of the times, and the facilities available require a more efficient use of the period of time allocated for formal education. It is not simply a matter of crowding more hours of instruction into this period or of placing higher demands upon the pupil, but rather a complex problem that is worthy of the ingenuity and abilities of the social sciences.

It is interesting that most of the questions in teacher utilization revolve around administrative arrangements. The concern is neither over developing new questions nor over affirming the traditional answers but rather for a new set of answers that will allow the school to make a closer approximation of a program that can satisfy the new demands. There is a great need for research to develop material upon which administrative decisions can be based.

Consideration of teacher utilization has developed in two directions. The first has sought to find ways to help teachers of crowded classrooms, mainly through teacher "aides."

Teacher utilization has developed in two general directions. In many ways, each of these has served to stimulate the other. The first direction has resulted from an urgent need to find ways of supplementing the teaching staff when the school becomes crowded with pupils. This direction has focused upon the use of teacher aides and clerical assistants. The goal has been to distribute the many tasks of classroom operation so that the teacher could spend more time in professional activities while an assistant would be responsible for the routine, nonprofessional jobs. Although the assistant has usually been designated as a nonprofessional, this has not necessarily indicated that he would be untrained.

On the other hand, the problem reflects a concern over improving teacher effectiveness and, as an eventual result, increasing the efficiency of the total educational effort. This approach, in a way, questions the arbitrary division of the teacher's efforts and activities into professional and non-professional without a demonstration of

the results of his efforts. There may be no correspondence between the effect which a teacher expects from his instructional activities and those which will occur. A person need not be a teacher very long in order to learn that the success of a presentation is dependent upon many things that are quite beyond his control. A demonstration that produces understanding at one time may only increase the confusion at another.

The efforts of this first approach are primarily of an emergency or stop-gap nature. Their acceptance as an integral part of the educational system, in fact their continued existence, will largely depend upon materials developed through the second approach.

Research into the effectiveness of aiding the classroom teacher must also consider the professional practice of teaching, its non-professional duties, and its place in a school's team of specialists.

While the immediate utility of research in teacher utilization is quite apparent, there is a deeper and more significant matter involved. The operation of a school is partially a resultant of the activities of the

many individual classrooms. Traditionally, and probably unavoidably, the operation of the classroom will be a function of the teacher. No amount of standardization, centralization, or supervision, even if they intended to, could remove the individuality of the instructional process.

Because of this, research oriented to teacher utilization, in addition to being based upon the effectiveness of the operation, must consider the professional practice of teaching and probably, the very nature of the practitioner. Unfortunately there are a number of common practices and traditional beliefs which suggest that there is little in teaching that could be considered as a professional operation or that requires professional training. For example, the use of homework indicates that for much formal learning, the teacher is unnecessary. Even more extreme, in cases where the child is assigned additional work because he is "behind," the parent is often asked to help him. The parent is not a teacher nor does he have professional training. Usually he will not even be given specific directions by the teacher. Yet he is expected to teach the child who is having trouble. If it were simply routine, it might be justified on grounds similar to those upon which the teacher aide is based. But since it involves a problem, presumably requiring diagnosis and restructuring, it would seem that here, if any place in teaching, professional skills would be required.

Similarly such ideas as encouraging a child to work "on his own" or using more skilled pupils to help the less skilled seems to challenge the idea of professional activities in teaching since for both of these cases—the very capable child and the slow learner—special professional attention would seem to be warranted.

Thus, while perhaps only a by-product in terms of the research, establishing the professional role of the teacher will be one of the major outcomes of studies in teacher utilization. Is he to be considered as a professional practitioner, whose task involves diagnosis and programming learning experiences in order to enhance the development of the individual? Or is he only one expert member of a team of specialists all of whom are concerned with generating learning? Finally, it may be, in terms of efficient operation, that he need be only a skilled operator who presents an established program to a group. The concern with individuals may be limited to identifying and referring the child who is in need of special treatment.

The teacher aide projects, however, tend to violate the traditional "master" role of the teacher and require a proper attitude on the part of the teacher and the assistant.

The teacher aide projects are a gross violation of the traditional role of the teacher. No longer is he the sole and final authority by the simple fact that he is the biggest and smartest person in the room. Even though the assistant is definitely assigned a secondary role, there is a real and a constant threat. Whether it was a part of the plan or not the child is given a choice of whom to consult. Also, he can work the one adult against the other. The mere threat of this places the teacher on the defensive and suggests that he must explain, if not justify, all of his actions to the assistant.

These problems, of course, need not arise. Where the practitioner is accustomed to managing adult helpers, and where the helper is well trained to assist, few of these problems would occur. However, the use of classroom assistants is not a part of the teacher's training. Modern concepts of managerial team work, even the basic ideas of managing human resources are beyond the scope of the teacher's professional training program. If a professional team is to be developed, the teacher may have to learn the skills of directing and managing a team. This will be a radical change in his role since, among other things, it will limit his contacts with the pupils and introduce at least one other major force into the matrix of human relations within the classroom.

Audio-visual equipment is another important method of increasing the effectiveness of teachers. More and better machinery is needed and teachers must learn how to use these aides.

Another important force is the trend toward mechanization. Audio-visual equipment has become fairly common in classroom programs. Even though neither their potential nor their optimal use has been determined, they have already brought several major changes and have suggested others.

The difficulties of planning a good unit were increased by the introduction of films and film strips. Whether the film library serves a number of schools, or one large school there are always frustrations in scheduling, getting delivery, securing equipment, and arranging the room. Few schools provide preview rooms and often a close schedule will prohibit a teacher from becoming sufficiently familiar with the material that he can make the best use of it.

Following the introduction of mechanical aids for the teacher's use, automation must be anticipated—that is, devices that are controlled and operated by the child. Such instructional aids could conceivably relieve the teacher of much routine work. Explora-

tory work with television suggests that in some areas it can almost replace the classroom teacher for periods of time. As the effectiveness of such devices is explored, new and more ingenious ones will be developed.

In order to obtain the educational efficiency needed for the future, both the number and the complexity of machinery in the classroom will probably be increased. The teacher will have to learn to use these.

These impending changes will bring discomfort and frustration to many. It can be expected that there will be periods of drastically reduced effectiveness before the improvements resulting from them will be realized.

Thus, one major focus for the near future must be concerned with providing the training, or retraining, which will overcome the inertia of traditions and enable the teacher and the administrator to accept and profit from the changes.

A study of teacher utilization, moreover, must consider the goals of education: (1) academic achievement and (2) personal adjustment of the whole child. It may be necessary to restructure teaching and its material to promote both of these goals at the same time.

In almost any group, a consideration of the goals of education can produce a lively discussion. Research on teacher utilization must face the morass in order to develop criteria. The use of expert opinion on good practices, or even on good results, was adequate for the early exploratory surveys but as the work becomes more detailed, more objective criteria will be needed.

Traditionally, the goal of the school is to generate academic achievement in the child. This would seem to be a fairly precise idea and one that can be measured with some accuracy.

In the past decade there has been an alternate movement to make achievement secondary to matters of the personal adjustment of the whole child and mental hygiene. There are some who would place these as the primary, if not the only goals, of the school. For them, academic achievement, even the rudiments of reading and calculation may be left to chance. This is parallel, although opposite, to the traditional approach that would concentrate on generating achievement while leaving mental health and personal development to chance.

The fact that these two ideas are opposed is a result of the timing of their introduction, not of their basic nature. The demands of modern living will not allow this opposition to continue. While improv-

ing mental health will be a growing need. At the same time, there will be an ever increasing requirement for technical knowledge.

Thus, another activity required by problems in teacher utilization will be to develop adequate criteria. Rather than merely recasting the older ideas, this may involve a redesigning of some basic concepts. For example, it may be necessary to restructure teaching methods so that the achievements contribute to the personal development of the child. As an alternate course, some thought may be profitably invested in designing experience to promote mental hygiene that will also produce the needed academic gains. In any case, the movement must be in a direction that will promote both of these goals, if they are truly separate, not to promote one at the expense of the other.

As an integral part of these investigations, it will be necessary to examine carefully the basic nature of the material. Few people would deny the usefulness of reading as a tool for learning other things or a need for at least a basic conception of arithmetic or mathematical relations. However, even specialists who have been concerned with these matters are hard pressed to define them or to describe their dynamics with any precision.

Learning to read is not easy. We know very little about how the skill is achieved. Apparently it is quite discrete from learning vocabulary. It would almost seem that once a child has learned to read, he can easily expand the range of words he recognizes and, until he has arrived at this point, there is little that can be done to teach him words. First grade teachers all know the child who merely "calls words." He can match an appropriate sound to the symbol but is unable to derive meaning from it. Phonics do not help him comprehend what he reads. Certainly research, not speculation, is needed to solve this riddle. It would not be helpful to assume, without evidence, that there is one best method for all children or one brief period of time in which they must develop this skill.

Since the goals of the educational process must inevitably revolve around the product, the forces affecting the development of the child must be considered. While criteria of ease of operation and administrative convenience are worthy of consideration, they must remain secondary to the education of the child.

Some people believe that a child can be taught without regard to personal involvement. That is, they apparently conceive of academic achievement as a superficial pattern that can be veneered without either involving or affecting the personal development of the child. The research in this area suggests that this is not so, but rather that there is an intimate relationship between the learning of formal material and

the personal organization of the learner. Interestingly, most of this research has been done in psychology, not in education. For example, solving arithmetic problems has been used to identify highly rigid persons who evidence strong prejudices. Simply repeating number series has been used as a clinical measure of anxiety. Handwriting has been used to diagnose personality structure, yet, in the elementary school, it is taught with no regard for this involvement. Certainly more than a little research will be needed to determine the relationship of the material and the process of learning it, to the personal organization of the learner.

There are many factors involved in the teaching-learning process. These are neither simple nor do they have an elementary relation to each other. Very little is known in this area.

More understanding is also needed about the many factors involved in the teaching-learning process. What causes learning? What effect has method presentation? What's about a child's readiness for learning?

For example, even though the school intends to produce learning in the pupil, we cannot yet say what causes learning or even exactly how it is produced. It is interesting that schools existed for many centuries before there was any systematic attempt to determine the nature of learning. Although there have now been literally thousands of experiments into the nature of learning, these have produced but little change in the classroom or its operation.

As if to complicate matters, the term "growth" has been introduced into education. In some cases it is used as a synonym for learning while in others it describes a supplementary process. The basic idea seems to be that there are other potent forces, besides the activities of the teacher and the general environment, that produce educational changes in the child. Even beyond this, there is the suggestion that besides presenting the material, there is little that the teacher can do to motivate, or secure learning. The situation is similar to that found in the medical profession. The practitioner cannot cause a wound to heal. He can take steps to prevent infection and to promote the general condition or tone of the person. Similarly a teacher may be able to expose the child to the material in an environment that allows learning and restrict those forces that would be counter to it, but he may not be able to cause the child to learn.

It would seem logical that if the presence or absence of the material is important, and it obviously is, the style or method of presentation would be impor-

tant. Certainly a second grade child, even an expert reader, could profit little from the *Encyclopaedia Britannica*. For this reason, special children's editions are written. From this it can be seen that the question is not concerned with the value of gross units, but rather with the limit beyond which further attention to the nature of the presentation will not produce a significant increment in the learning.

The problem appears simple at first, but the limit may vary with different individuals and even with different times. Other interactions, such as the personality and mood of the teacher, or the composition of the group may aid or interfere with the presentation.

Closely related to the problem of learning in the child is the idea of readiness for learning. Here again the search is for limits. Obviously, few two-year-olds are ready to learn to read. For some reason, there has been little speculation on the upper limit. Since there are known cases of adults learning to read, the only limits may reside within a particular method rather than within the person or the operation. This would not deny the existence of a maturational or psychologically optimal time.

At the present time the general opinion, at least as far as the elementary school is concerned, is to use what may be described as a multiple attack. That is, the teacher makes use of a number of methods and techniques rather than a few. The assumption here is that an increase in the variety of presentations will insure contact with a greater variety of pupils.

The multiple approach is probably a corollary to the belief that the goal of the teacher must be to operate a harmonious classroom. The material is presented in a number of ways and the child is encouraged to choose among them. He is not forced to accept any particular one. He is encouraged to move in the direction of the goal but is not forced to reach it within a specified period of time. Rather than using techniques or methods that are essentially suppressive or oppressive, the teacher creates and maintains a harmonious atmosphere in the classroom.

Both of these ideas are based upon avoiding obvious pitfalls rather than fulfilling basic requirements. Much work needs to be done before the essential requirement can be specified clearly enough to build a pattern of classroom operation.

Teacher utilization and classroom efficiency are affected, in addition, by public opinion that insists upon returning to the "good old days" and the idea that good medicine, be unpleasant.

Finally, progress in teacher utilization and classroom efficiency may be hindered

(Concluded on page 56)

Curriculum

Is



How one community
spotlighted the curriculum
in developing a successful
school-press program —

JOY J. TAYLOR

Editor of Publications,
San Bernardino Calif., Schools

Conflicting articles smacking or patting public education on the head will continue to fill the pages of our newspapers as we enter an outer space era — many times confusing the American public and leaving communities in a daze. Since American newspapers hold the key to community enlightenment about a city's educational program, it is important that newspapers measure up to their potential in accurately informing the public about a school program. More often than not, this potential to measure up depends upon co-operation from boards of education.

On the Community Level

Long before Sputnik reared the inquisitive heads of those who once accepted education as routinely as public telephone booths, the *Sun-Telegram* of San Bernardino, Calif., was pioneering in presenting the school curriculum as part of its daily news coverage — in depth. This pioneering was not an accident, but the result of the board of education's policy to keep the community as informed as possible about day-to-day activities of the schools: "How Johnny is Learning to Read," "Why Does Sam Need a Physical Education Program," "How Do Schools Educate Gifted Children," "Why Do Schools Have a Program for Mentally Retarded," "Where Does School Money Go," "What Do Administrators Do," etc.

The story of successful press relationships began its evolution more than eight years ago when the newspaper publisher agreed to let the schools run a weekly column on anything they wished to write about. Various educators not trained in newspaper writing took turns at whipping out a column — some were fair while others occasionally caused readers to skip them in a hurry. Following the board of education's decision six years later to establish a position for a public and staff information person, the column became part of the total press-school relations program.

A survey, which was then made of an entire year's newspaper column inches devoted to schools, revealed that sports, PTA, and extracurricular activities accounted for nearly half of the 16,000 inches devoted that year to schools. Weak areas included curriculum, student and staff recognition, scholarships and awards, and teachers' activities as related to the classroom.

One of the most interesting bits culled from the report was that nearly 1000 column inches had been devoted to "Public Schools Week" that year. If newspapers would devote that much space to a city-wide activity sponsored by the schools, why not use the space to advantage — from a standpoint of both newspapers and school system?

Using this survey's results as a guide to action, an organized plan was begun to touch various areas of school opera-

tion and school curriculum, with this relatively inexpensive medium which packs a psychological punch in any community. San Bernardino began to develop methods of shifting news coverage into areas formerly underdeveloped. At meetings of school administrators, school public information personnel, and newspaper editors, these policies were adopted:

1. Workshops would be presented by the newspaper for school personnel at which time newspaper techniques and headaches in covering schools would be presented.

2. All news except that developing from journalism and public relations of the two high schools would be channeled through the schools' publications office, with the newspaper reserving the right to make contacts with the schools.

3. Picture pages from the schools were authorized, if pages had reader interest and could be developed into top newspaper material.

4. Special feature pictures on holidays, and closing and opening of school would rotate from school to school.

Appreciating the Gifted

School-press relations have contributed to one of the most important phases of the San Bernardino school program — a gentle shifting of public opinion to allow the academically talented group to also be a popular

With proper encouragement, what's going on in the typical San Bernardino, Calif., classroom became a very popular news item.



group in school. Initiated by the schools (out of 46 top student body leadership posts in one high school, 42 students were from the academically talented group), the newspapers co-operated in recognizing students of potential in numerous ways: top coverage of scholarship and awards programs, student-written newspaper stories on community and school activities, feature stories on what and how youngsters are learning in school which showed superior students at work in the classroom, special interviews on thoughts and ambitions of more capable learners. Snapping of flash bulbs and on-the-spot reporting at a dinner or meeting recognizing youth with academic potential encourages the kids and places them in the limelight in their peer group. The newspaper also initiated a special weekly section for teenagers, featuring material especially for them and directed and written by them.

Spotlighting Teachers

Next step was on-the-spot coverage of teacher workshops with good photos stressing that teachers too must "go to school" and keep up the learning processes. Prominent educators who visited the district as outside consultants (Robert Havighurst, Paul Brandwein, James B. Conant, etc.) were interviewed for the newspaper. A systemized method of culling names of teachers winning grants, awards, and scholarships was developed—and we proved once and for all one large story is more impressive than 20 scattered over many newspaper editions.

Experimental Follow-Ups

In addition to running the story in newspapers, different types of experimental follow-ups have been tried. Public reactions always encourage the

newspaper and encouragement is essential when a newspaper makes a drastic shift in its news values:

1. Children wrote thank-you letters (as a writing lesson) to the publisher of the paper.

2. Children wrote letters home to parents asking for parental reaction to the news story. The parents' replies were compiled and sent to the newspaper publisher. (And, of course, the paper did a news story on the parents' reactions to the story, completing the chain of events.)

About this time the *Sun-Telegram* sent a readership survey to all of its 64,000 subscribers. It was helpful to note that even before Sputnik, 30,000 people noted an interest in reading about the schools and 19,780 read the weekly Sunday column on schools.

Schools have welcomed newspaper interest because it is less expensive to present what the schools are doing through newspapers than using additional printed brochures. The schools generated the philosophy "We're not going to whitewash the program." And we didn't. Newspapers receive accurate and interesting coverage.

It was rough going for the two years that our school-press program has been in operation. Newspaper people thought we were stuffy, tied up in red tape, untruthful, and gilding the lily. "For years I couldn't stand trying to work with a school principal on any story—mainly because they couldn't see a newspaper's problems in trying to get reader interest. Also they would shove every good kid in a classroom into a photo where we wanted a special feature effect. Now the principal and teachers are primed beforehand and we get some top features," a *Sun-Telegram* editor now notes with satisfaction. Educators thought newspapers were inaccurate, unfair, and biased. Both had sound reasons for their opinions—all that was needed was communication and understanding between the two.

The newspaper is now taking a more active part in our school program—sponsoring workshops, giving more attention to senior and junior high school press days, offering resource people, etc. We are giving the newspaper full credit for their continued support, are inviting contingents of press and radio to special meetings and conferences and continually relying on the *Sun-Telegram*.

Because of the mutual trust and understanding between school and press, even in a negative school situation which may be creating dissension in the community, the newspapers remain unbiased and fair—many times going out of their way to defend the schools. An acknowledgment of this program was contained in a recent bulletin from the superintendent to all administrators:

During the past two years the local public information media, including the newspapers and radio stations, have gradually revised their thinking as to the value of school news.

For example, during the 1955-56 school year total column inches of news in the *Sun* ran 16,691. This increased to 23,728 in 1956-57. Increase in number of inches is secondary in importance to these facts: Curriculum stories increased 50 per cent in 1956-57, professional growth increased 62.7 per cent, science fair increased 57.8 per cent, and special programs, including the more capable learner program, increased 79.2 per cent. Not long ago the *Sun* felt that news, as such, emanating from the schools was concerned primarily with sports, PTA, and extracurricular activities. It now terms as news a large number of classroom activities and events as evidenced by recent picture pages on elementary science, more capable learner, science fair, etc.

A clear explanation of the fundamentals of business law used in managing the schools

everyday LAW for the administrator

Legally and actually, the public school systems of this country operate almost entirely on an agency basis. Districts with their boards of education generally have been held by the courts to be agents of their respective states; superintendents, principals, teachers, business managers, custodians, clerks, and other employees act as agents of the districts and boards, with much or little authority delegated to them.

These generalities are fairly common knowledge among the craft. What seems less known by board members and administrators, if one may judge by their public and personal acts involving basic principles of agency and a study of the school cases growing therefrom, are the rudiments of the agency relationship. Parenthetically, not many school officials appear to be more than cursorily acquainted with the elements of contracts,¹ sales, negotiable instruments, and certain other aspects of the law that also affect the everyday operations and routine business of school systems.

Scant help in understanding the legal concepts and principles that apply to daily and business operations will be found in the materials on school law. Such knowledge apparently is taken for granted or considered too elementary for treatment. What follows here is intended to provide some help in explaining and interpreting a few of the basic rules of law that are applied almost daily in managing school systems.

What Is an Agent?

An agent is a person or body acting

¹For an explanation of some of the commoner rules of contract law as they apply to school systems, see W. A. Stumpf, "Contracts and School Management," SCHOOL BOARD JOURNAL, July, 1958 (pp. 22-23).

W. A. STUMPF

Professor of Education, Duke University, Durham, N. C.

for someone else, called the principal, in dealing with third parties.² The agent may act openly or he may act without disclosing that he is representing another. In either case his actions presumably are based upon and confined within the authority delegated to him. Not infrequently the authority delegated to an agent is inadequately or haphazardly defined when it is put into words at all; it may be implied from the actions of the respective parties. It is sometimes assumed to exist when it does not and its extent may be misunderstood when it does. In brief, it can be and is a source of trouble varying from annoyance to expensive litigation.

To illustrate: The school board may authorize (that is, delegate a portion

²Esel R. Dillavou and Charles G. Howard, *Principles of Business Law*, 5th ed. (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1956), p. 210.

of its power to) custodians to make certain emergency purchases, charging the items to the board. What the custodian may buy, how much the total cost may be, when the purchases may be made, etc., are actions of the agent-custodian within the board's control. But when the custodian goes to the shop to buy, he probably is considered by the seller as virtually equivalent to the board in so far as the purchase is concerned — his identity as a person is lost in that of his identity as an agent of the board. Since the seller is not likely to inquire about the extent of the custodian's authority to make the purchase, particularly if he knows the custodian personally and has sold him things in the past, the chances for trouble arising from such a relationship are great, indeed, and few administrations will now grant the authority cited unless a purchase-order system is used.

The superintendent's relationship to the school board differs somewhat from that of an ordinary agent in that his status may be fixed by law as the chief executive of the board, a designation which suggests but hardly defines his status as the board's agent. His statutory responsibilities may even exceed those of being the board's chief executive — he may also be its legally designated secretary or treasurer. Similarly, a teacher's authority is not all derived by specific delegation from the district or board of education.⁴

As implied in the preceding paragraphs, the most important single problem of agency probably is that of determining the kind and extent of an agent's authority. The problem is met when a school system deals with others as well as when others deal with it. How much discount or trade-in does the salesman have the authority to grant in the purchase of an accounting machine? Does the publisher's representative have the authority to add a penalty clause guarding against late delivery to a contract for "annuals"? It is the responsibility of the third party — in these cases, the business manager — to find out. However, if other publishers' representatives have the power to add penalty clauses to contracts, the business manager need not determine a specific agent's authority on the point; he is not bound to look for unusual restrictions upon an agent.⁵

Clearly, those dealing with agents do so at their peril for they must prove that the agency relationship exists. If a teacher, indicating by his action or words that he is acting as an agent, charges the cost of school supplies to the school district without authority to do so, the board is not obligated to pay for no agency relationship can be proved. If, however, the board approves the unauthorized act by accepting the benefits, it must pay provided, of course, the purchase was within the board's own authority to make, anyway. An interesting point arises if the teacher uses the supplies legitimately in his classwork but without the knowledge of the board or the school principal. Again, the board need not pay — it must have complete understanding of the important details before its act of apparent acceptance of the benefits can be construed as approval of the purchase.⁶ The seller in this case must seek his payment from the teacher.

The board makes itself liable to the application of other rules of agency when it is an undisclosed principal. Thus, it may authorize a realtor to find a buyer for unneeded land without dis-

There is need for school officials to be acquainted with the elements

closing that he is acting for the board. Even though the realtor's authority has been limited, if he commits acts which would have been within the apparent scope of his authority had the board been known to be his principal, the board is responsible for such acts.⁷

Those handling the business affairs of the board need to be aware of common rules of agency before such relationships are arranged or accepted. When dealing with the agents of others including salesmen, the board and its employees ought certainly to investigate an agent's authority before important transactions are carried very far toward completion. The board also should institute routines that will protect itself and the community against unauthorized acts on the part of its employees.

When the District Buys, Sells

Although contracts for personal services far exceed in dollar value all others for nonconstruction purposes, school districts nevertheless buy large amounts of supplies and equipment, and they also occasionally sell automobiles, trucks, used equipment, and the like. The risk of loss involved in every transaction involving a sale normally rests with the owner of the property. Consequently, in large transactions it is especially important to know just who the legal owner was at a given moment.

A first principle of the law of sales is that ownership passes from the buyer to the seller when they intend it to. But when, in a given sale, do they intend it to? This has been the point of issue in many a suit. We sell 200 used auditorium chairs to a summer theater for cash. It is well established in law that in most cash sales ownership passes when we receive the cash. But suppose we accept a check which subsequently "bounces"; then where do the parties stand in connection with the ownership of the chairs? In this case the rule is that we may demand return of the chairs — the buyer obtained only a voidable title.

Suppose the truck carrying the chairs is wrecked and the chairs are damaged, whose loss is it? The loss is the buyer's if he agreed to provide for the hauling because ownership passed to him when the chairs were placed on his truck or the one he hired; however, if we had agreed as a part of the transaction to deliver the chairs, the loss in transit would have been ours because we owned the chairs until we delivered them physically to the theater. The general rule:

If goods are shipped f.o.b. to the seller's place of business, a loss in transit is the buyer's; if shipped f.o.b. to the buyer's place of business or any other designated point, damage in transit to that point is the seller's loss.

Another example: If we buy automatic scrubbing equipment on trial or on approval, we do not own the machines until our actions show that we intend to keep them.⁸ If we do not want the goods, we must not retain them beyond the agreed time or for an unreasonable time if no trial period was stipulated. By keeping the goods too long we imply by our conduct an intention to own them.

We have the right to inspect goods shipped to us (except those sent C.O.D.), and we may reject them if they do not conform to description, sample, or warranty. Even though we may have agreed to pay the delivery charges, if the goods are unacceptable any damage incurred in transit is the shipper's loss. Ownership of goods shipped C.O.D. ordinarily passes to us when the goods are delivered to the carrier,⁹ but the shipper is protected in that he retains a claim or lien on the goods until we pay for them.

The foregoing more common rules drawn from the law of sales are not unduly complicated, and wisdom suggests that the school district's receiving clerk or others concerned become aware of them.

Checks

Negotiable instruments are particular kinds of commercial "paper" that pass almost like money from person to person. Checks, promissory notes, warrants against taxes, and bonds are probably the most common in so far as school business affairs are concerned. A school board doubtless will employ legal counsel or have the advice of experts on bonds, notes, or warrants. The use of checks, however, is an everyday occurrence and certain essentials about them should be known.

A check should be presented for payment as soon as reasonably possible — the next business day if the check is drawn on a local bank. If the check is on an out-of-town bank, it should be forwarded the next business day. Under the Uniform Commercial Code a bank need not pay a check presented more than six months after its date.¹⁰ Checks should not be allowed to accumulate. It is annoying to those drawing the checks to have them outstanding, and

⁴State v. Burton, 45 Wis. 150, 30 Am. Rep. 706;

⁵Dillavou and Howard, p. 221.

⁶State v. Randall, 79 Mo. App. 226.

⁷Ibid., p. 214.

⁸Ibid., p. 224.

⁹Hunt v. Wyman, 100 Mass. 198; Smith Co. v. Moscahlades, 183 N.Y.S. 500.

¹⁰Harold F. Lusk, *Business Law* (Homewood, Ill.: Richard D. Irwin, Inc., 1955), p. 708.

of contracts, sales, negotiable instruments, and other aspects of business law that affect the everyday operations and routine business of school systems . . .

in times of economic stress the school stands to lose if the drawer of the check or the bank fails in the meantime.

Checks or other negotiable instruments are transferred from one party to another by endorsement. Those handled by a school, a school fund, or a school district should be endorsed in full; i.e., "Pay to the order of the Depositors National Bank, School District No. 91, by I. Payit, treasurer," or other appropriate wording. "For deposit" may be added, thus restricting the endorsement. Since endorsements ordinarily are rubber-stamped, no time is gained in using less than a full endorsement, and some protection is lost. A blank endorsement — simply writing "School District No. 91" on the back of a check — legally makes it payable to its bearer, which, in case the check is lost, means that the finder might be able to cash it despite his lack of good title to it. The ensuing straightening-out of the matter will be at least annoying and certainly time-wasting as well.

There is, of course, no legal rule against having several persons sign the checks drawn by a school district. Nevertheless, the efficacy of this practice in preventing embezzlement is overrated, especially if one or more signers writes his name on a block of checks for later use by the other cosigners. The problem of dishonesty is better solved by adequate accounting and auditing procedures and with greater convenience to all concerned.

A problem of occasional importance is how to handle an employee's checks when garnishment proceedings have been brought against him. The first step is to ascertain whether or not the law in your state permits garnishment of the salary of a school district employee. In case it does, then those who must sign the check and transmit it should do so only upon court order, called a writ of garnishment. In case an employee wishes to assign his checks to a creditor, the business manager should, as a minimum precaution, require a written order from the employee, and he probably should require the employee to endorse the check to his creditor before he (the business manager) sends it.¹⁰ In matters like these the best rule to follow is to consult the board's attorney before taking any irrevocable steps.

The District as a Landlord

Although the courts are divided in

⁹Uniform Commercial Code, Sec. 4-404.

¹⁰Employees often ask that their checks be sent directly to a bank for deposit to their accounts. Here, too, it is wise to have the employee's written order on file.

their opinions concerning the right of school districts to provide living quarters for school personnel, rural boards frequently and city boards occasionally do so. Such quarters are provided for the duration of a person's employment, for the school year, and on other terms which ought to be stated clearly in the employment contract or some other written agreement. Sometimes quarters are provided as part of the individual's salary; sometimes there is a stated rental.

Whether or not a landlord-tenant relationship exists between a school board and personnel living in district-owned buildings depends upon the agreement. According to Lavine,¹¹ an employee who occupies his employer's property as part of his employment contract and incidentally to his duties is a licensee, not a tenant, and he may be removed at any time. Lavine lists school teachers among his examples of licensees, but he does not explore the legal effects of the various types of arrangements that exist between school personnel and school boards in this connection.

It is not clear whether a teacher who pays rent for a room in a teacherage should be classified as a licensee, a lodger (one who *occupies* but does not *possess* the space), or a tenant. Similarly, the status of a principal or custodian who occupies and pays rent for a house on or near the school grounds is not clear; as stated previously much apparently depends upon the agreement and the specific circumstances.

School districts sometimes may own land, buildings, or living quarters which they rent to others as well as school personnel. As in the case of any landlord, the district grants exclusive occupation of the property to the tenant, subordinating its own rights in the property to those of the tenant, for a consideration designated as rent. (It is assumed that renting property comes within the scope of a board's authority.) Unless there is a clause in the agreement permitting it, a landlord has no right to enter the premises during the term of the tenant's lease; if he does, he is a trespasser.

A common problem between landlord and tenant is who owns the fixtures, etc., paid for by the tenant. If the matter is not specifically covered by an agreement, the test is whether or not the fixture was intended to be permanent. How the fixture is fastened, injury to property if it is removed, and the like are not conclusive tests;

the intent must be determined from all circumstances. The ornaments, rugs, and curtains that Principal Lee has placed in his "principal's house" were intended to be temporary, as are most of those installed by tenants, and he may remove them without question when he leaves, but if he installed a gas heating device, for example, or a furnace or an ornamental mantel fastened so that it became a part of the house, it would probably be ruled a permanent fixture even though he paid a substantial price for it. The manner of fastening to the house is presumably an indication of his intention.

The tenant is responsible for the care, upkeep, and repair (except structural repairs) of the premises unless otherwise provided by lease or statute. When a principal or teacher resigns, his tenancy ordinarily will end, and he will vacate the quarters within a reasonable time. If he refuses to do so, he may be treated as a trespasser or he may be removed by legal proceedings, but a landlord may not resort to force instead of law to obtain possession of the premises. These rules are presented on the assumption that the paying of rent by a principal or teacher coupled with freedom not to occupy the premises if he doesn't wish to makes him a tenant.

In Conclusion

In conclusion, it is suggested that just as copies of standard textbooks on school law should be on the desks of the superintendent and the business manager, so should a manual on business law be on the desk of the business manager, and in smaller systems, also in the superintendent's library. Even when legal service is provided, annoyance, embarrassment, and litigation may be avoided if one discovers before blunders are made that a contemplated action may violate common rules of law.

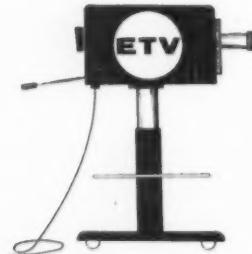
¹¹Lincoln Lavine, *Modern Business Law* (New York: Prentice-Hall, Inc., 1954), p. 631.

**Principles for an effective approach
to direct instructional use of ETV —**

Cincinnati's Adventure Into ETV

ROBERT P. CURRY

Assistant Superintendent, Cincinnati, Ohio, Schools



Educational television: its progress and problems. Five years have gone by since the first educational television station began broadcasting. A look back at its history and a look ahead to its future is presented in this three-part survey about WCET-TV, written by top school administrators in Cincinnati. The second article will consider production of educational telecasts; the third will discuss how to evaluate the effectiveness of the programs...



Television in the American home is an accepted part of life in the United States, but television in the American school is another matter. Many boards of education and school staffs will soon face the necessity of making a decision about the use of educational television. And the decision will not be an easy one.

Needed: A Moderate View

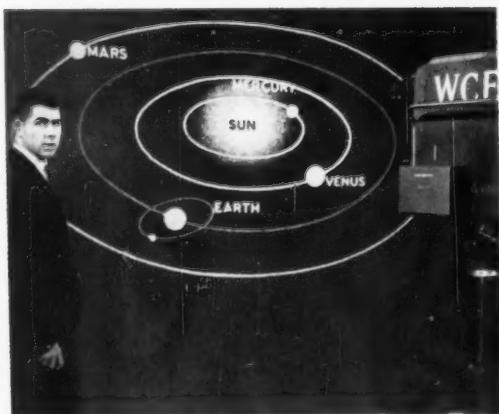
There are the cheery optimists who say educational television is the greatest invention since the printing press and that it will reshape the basic structure of education. As such, they say it holds the solution to the teacher shortage, the dearth of classroom space, and the question of higher salaries.

Then there are the gloomy pessimists who view television as a brooding menace to the freedom of the teacher and the student. They believe it provides a narrow, restricted type of education, resulting in dangerous control of educational policies and practices.

No board of education can afford to accept or reject educational television on the basis of such extreme viewpoints. There is no reason to believe at this time that television will in itself solve any of the major issues in public education. Nor is there any basis for believing that the use of television will result in a poorer educational program for pupils. Until evidence is available to support such views, a board of education must discount both opinions.



As part of Cincinnati's unified ETV approach, classroom teachers visit the TV studio to learn more about the advantages and problems of teaching by television.



This Cincinnati teacher of sixth-grade science uses a rear screen projector to show schematically the rotation of planets around the sun.

In the belief that the experiment of one school system might shed some light on a complicated problem, this article and two others to follow in succeeding issues have been written to report some of the problems faced, decisions reached, and experimental evidence collected in four years of educational telecasting.

Cincinnati's Experiences

In April, 1952, WCET, UHF Channel 48, Cincinnati, was issued the first license for an educational television station in the United States. It was not until July, 1954, however, that the first programs were telecast. In the intervening time, the Greater Cincinnati Television Educational Foundation, composed of 51 qualified educational institutions, was chartered as a non-profit corporation; an executive committee of educators and businessmen, with the superintendent of the Cincinnati public schools as chairman, was appointed; the funds necessary for establishing the station and purchasing the equipment were raised by contributions from business, industry, the Fund for Adult Education, and Parent Teacher Associations. A production and engineering staff was also selected during this period.

Now with four years of experience and hundreds of programs to its credit, WCET presents 21 live programs a week on an operating budget of \$132,000 per year. Most of the operating costs are borne by the educational institutions in the area, with the Cincinnati board of education contributing approximately 65 per cent of the funds in accordance with the provisions of an act passed by the Ohio Legislature which permits boards of education to make an annual appropriation for the support of educational television stations at the rate of five cents on each one thousand dollars of tax valuation.

During the first year and a half the telecasts produced by the Cincinnati public schools were primarily enrichment programs. Beginning in 1956, programs of direct instruction involving systematic lessons have been telecast. These classes have included chemistry, biology, and driver education at the secondary level and several instructional programs at the elementary level. During the present year, sixth-grade science, seventh-grade mathematics, ninth-grade biology, and tenth-grade driver education are being taught directly by television for the entire school year.

Direct Instruction by ETV

It is believed that experimentation in direct instruction by television in a variety of subjects and at different grade levels is needed if educational television is to be examined without

Approach ETV in your schools with the following principles in mind:

prejudice. Surely there can be no argument as to whether or not television is here to stay. The issue is whether television can and should be used in the direct instruction of pupils.

Only the naive believe that television could ever replace the classroom teacher. It is not a question of television *or* the classroom teacher; rather, it is television *and* the classroom teacher. It is quite possible that television will allow for some realignment of responsibilities between a classroom teacher and a television teacher. Class size may vary with several average-size classes combined for television and smaller groups scheduled for other aspects of instruction, such as laboratory work. Obviously the possibilities are numerous, but none implies that a competent teacher will be replaced by a mechanical instrument, no matter how ingenious it may be. We know, for example, that the interchange between pupils and teachers will continue to be important. It is time, then, to stop viewing television as a barrier to teacher-pupil relationships and to attempt to learn how to use it as a reinforcement to this interchange.

It is time, too, to recognize that we need far more evidence of the effectiveness of television instruction. Glib accounts of incidents of children's enthusiasm for an educational television program, however accurate or amusing, cannot be substituted for scientific evidence. To date more emphasis has been placed on production of programs than on the evaluation of their success, and understandably so. Until some of the production problems are solved, undoubtedly there is little to evaluate. But once solved, there is need for experimental use of television that meets the accepted standards of educational research. There is need, also, to recognize that experimental evidence becomes valid only as it stands the test of time.

The decision for a school system to use television is not enough. It is to be hoped that before such a decision is made, the board of education and the administrative staff will have defined the purposes of education in their community and agreed upon the instructional practices to implement these purposes. Only then will it be known where or if television can be used effectively. Admittedly television is a far cry from the Mark Hopkins' ideal of education but so also is elementary and secondary education in general in this country. Rarely does a teacher have only one pupil; rather, instruction is organized for groups of pupils. It seems

The most effective use of television requires close co-operation of the classroom and television teachers.

Television requires proper planning of lessons which involves detailed preparation of teacher outlines, visuals, etc.

Systematic evaluation must be planned from the beginning.

far more profitable, therefore, to examine television in view of desirable instructional practices now followed. For example, the wise use of television implies the grouping of pupils for the best adjustment to individual differences.

It is possible that the combination of instruction by television and classroom teachers could result not only in grouping for televised lessons but also for more attention to individual differences by classroom teachers. If so, it must be recognized that the extent to which this is done determines the number of teachers used and the total cost of television.

It should be anticipated, also, that the use of television presents some administrative problems. For example, it is expensive to install and operate television equipment, and it is unrealistic to expect immediate savings in other costs to offset these. In addition, the use of television multiplies the complexity of scheduling classes and pupils. Neither these nor other similar administrative problems are beyond solution, but they cannot be ignored.

It is suggested, therefore, that school boards and administrators examine television not in terms of promises of solutions to major problems nor in terms of fears of an impoverished instructional program, but in terms of its potential to help solve some of these problems and to improve the instructional program.

The evidence so far available does indicate that pupils at both the elementary and secondary level learn at least as well by television as they do by conventional classroom procedures. The findings, however, are based solely upon

the results of objective achievement tests.

While such evidence may be considered incomplete since education involves far more than those factors measured by achievement tests, it does allow boards of education to view television as a potential resource. Although it is encouraging to know that pupils learn some things as well by television as by conventional classroom practices, it is equally important to remember that acceptance by teachers, pupils, and parents is not earned solely by test results. Without the acceptance of the medium, the potential of television cannot be realized. It is important, therefore, to resist the temptation to legislate the use of television, no matter how convincing the evidence in its favor. Changes in the instructional program are most successful when the staff of teachers and administrators join in effecting the changes and when pupils and parents understand these changes.

Finally, on the basis of the experience of one school system, it is suggested that the use of television can be approached with the following principles accepted tentatively:

1. The most effective use of television requires the close co-operation of the television and the classroom teachers, that is, the television teachers capitalize upon the peculiar qualities of the medium that allow them to teach most effectively and the classroom teachers perform those functions that can best be done without television.

2. Instruction by television is most successful when persons with administrative, supervisory, and teaching responsibilities work co-operatively. The use of television does not imply the need for another specialist in education; rather, it implies the use of a new medium by skilled teachers.

3. While it is recognized that television has much to contribute to enriching or supplementing the program of instruction, the most urgent need is in the area of direct instruction. It is here that television has real potential for wide use of competent teachers and best use of physical facilities.

4. The demands of television require properly planned lessons involving much time in the preparation of teaching outlines, visuals, and other aspects of production. Such preparation is necessary if televised lessons are to be uniquely valuable.

5. Systematic evaluation must be planned from the beginning and expertly conducted under conditions that observe the basic principles of sound educational research. ■

The two articles in succeeding issues will be concerned with the production of educational telecasts and with evaluation of their effectiveness.

WORD FROM WASHINGTON

School Participation in Implementing Title III

ELAINE EXTON

Funds will be available to states and educational institutions by January or February for most of the new programs under the National Defense Education Act (Public Law 85-864) Arthur S. Flemming, the Secretary of Health, Education, and Welfare, told a recent press conference.

If this timetable is realized with regard to grants to state educational agencies (1) to aid public elementary and secondary schools in purchasing vital equipment needed in effective teaching of science, math, and modern foreign languages and (2) for the "expansion or improvement of supervisory or related services" in these subjects as he predicted, will local schools be ready to help put into effect these provisions of the Act?

What items of equipment will constitute the best educational investment for your school? What remodeling is needed in order to make the most effective educational use of the equipment to be purchased under the Defense Education program? How can storage and maintenance facilities for science instruction be improved? How can your school system most efficiently utilize the supervisors and consultants who will be made available in many localities and many schools as a result of the Hill-Elliott Law? What training should be offered to upgrade the work of supervisors and teachers?

Questions such as these will soon confront many school administrators and board members who wish to utilize the provisions of the National Defense Education Act for strengthening instruction in science, math, and modern foreign languages.

Since local public schools do not become eligible to participate in Title III unless their state educational agency submits a state plan to the U. S. Commissioner of Education in "substantially approvable form," it is important to find out from your State Department of Education what their intentions are in this regard, the priorities they will establish in their plan, and the standards they will recommend which local schools must meet.

Government Regulations

Some confusion has been engendered by the U. S. Office of Education's issuance of two sets of regulations governing the preparation of these state plans. On the basis of the "proposed" instructions released to Chief State School Officers under the date of November 10, 1958, 27 states submitted applications.

These rulings were superseded on December 10, 1958, by a revised set of regulations modified to accord with new decisions of the Department of Health, Education, and Welfare lawyers. The new instructions, which were accompanied by a 20-page guide that had not been furnished with the earlier document, were necessitating "many changes" in the preliminary plans developed in some states.

As 1958 drew to a close the Office of Education had received only four state plans based on its December regulations. None of the state plans under this Title had yet been "approved" at the time this article went to press in early January, although officials were anticipating that several would receive a green light before February. The fact that a number of states will need to consult their legislatures in order to obtain funds or authority to carry out the provisions of the National Defense Education Act was also occasioning delays.

Officially the date on which a state's plan for Title III becomes effective and when federal funds can be made available to the state is the one on which it is received by the Commissioner of Education in the U. S. Department of Health, Education, and Welfare in "substantially approvable form."

Upon arrival at the U. S. Office of Education it will be routed to the State Plans and Reports Section (within the New Aid to State and Local School Systems Branch) for review and checking against official regulations. This unit which will make recommendations as to its approval is headed by Lloyd King who served as the Executive Secretary of the American Textbook Pub-

lishers Institute from January, 1943, to July, 1958, and prior to that was the State Commissioner of Education for Missouri.

Ingredients of State Plan

A state's plan not only affords the legal basis for the state's participation in Title III of the Defense Education Act but furnishes the grounds for determining the propriety of state and local expenditures in which federal participation is requested. It should be drafted in a form that covers the full authorizations for appropriations under the Act as well as the four-year period of the Act's duration.

As described in the U. S. Office of Education's December regulations the basic elements that a state's plan should present include:

1. The programs of the state for acquiring equipment suitable for use in providing education in science, mathematics, and modern foreign language instruction in public elementary and secondary schools, and for minor remodeling incidentally necessary to the use of such equipment.

The Act itself defines this equipment as "including audio-visual materials and equipment and printed materials (other than textbooks)."

As interpreted in the official regulations "equipment," eligible for purchase through projects, means fixed or movable articles which are used in the instructional programs of science, mathematics, or the modern foreign languages and which are not an integral part of the buildings or building service. As used in this part, the term does not include ordinary storage facilities or those items of equipment which are usually supplied in the furnishing of general classrooms.

"Equipment" includes "materials" as that term is defined in subsection (i) which follows: (i) "Materials" means films, filmstrips, slides, tapes, discs, and recordings; books, pamphlets and periodicals for reference use (other than textbooks, workbooks, and manuals), and other printed materials, such as maps and charts, which are used as media for instruction in the fields of science, mathematics, or the modern foreign languages or one of the branches of one of them.

As distinguished from supplies, materials are items which with reasonable care and use may be expected to last for more than one year. For example, chemical elements and other supplies which are consumed in use may not be considered for purchase under this program, according to these regulations.

2. The present supervisory and related services of the state agency.

3. The program for the expansion and improvement of supervisory and related services in the fields of science, mathematics, and modern foreign languages.

An expansion or improvement of an existing program is defined in the regulations as one "which involves additional expenditures by the state educational agency for such services . . . over and above those hitherto expended for like services and does one or more of the following: (1) provides for the employment of additional qualified personnel to render such services; (2) provides for rendering additional or improved service to local educational agencies; (3) extends the services already being rendered to more local educational agencies . . ."

The Federal Government will participate only in the additional amounts of the expenditures for such supervisory and related services. . . . Whether a program is

an "expansion" or "improvement" of an existing program will, for the fiscal year 1959, be measured against the activities being carried on by the state educational agency prior to September 2, 1958 (the date President Eisenhower signed the Defense Education Act into law). . . .

The programs for expansion and improvement of supervisory and related services in the state plan must be set forth in terms of (a) improvement of supervisory and related services generally; (b) strengthening instruction in the fields of math, science, and modern foreign languages through improved supervision; and (c) the effect such improvement is expected to have on the acquisition and utilization of equipment in each of (these three academic fields during the law's four-year period).

4. A description of the administration of the state plan.

The National Defense Education Act requires the state plan to set forth principles for determining priorities for projects submitted to the state educational agency for approval. It is also mandatory for it to provide "for the establishment of standards on a state level for laboratory and other special equipment acquired with assistance furnished under this Title."

According to the "Guide" released by the Office of Education each of the programs to be undertaken by the state for the acquisition of equipment and minor remodeling necessary to its effective use must be described separately in terms of (a) the instructional field to be served, and (b) the grade level or levels for which the equipment is to be acquired.

The Guide further specifies that the standards established for the guidance of the local educational agencies in preparing projects and for the guidance of the state educational agency staff in approving projects should be directed to establishing:

- a) The quality of equipment to be purchased.
- b) The quantity of equipment to be purchased (in terms of the minimum ratio of equipment to pupil use which is considered to be educationally effective and the maximum ratio of equipment to pupil use in which the state will participate financially).
- c) A list of the items of equipment, for each of the programs established . . . in the purchase of which the state will participate financially.
- d) The conditions with respect to available space and competent personnel for operation and maintenance of equipment which the state will expect the local educational agencies to meet with respect to each of the programs established by the state plan.
- e) The extent and character of the "minor remodeling" in the cost of which aid may be claimed by a local educational agency.

States are requested to require that equipment and minor remodeling projects comply with all applicable building, fire, and other public safety regulations of the state and community.

To be approvable under the terms of the Act a state plan must provide that any applicant for a project under Title III may have a hearing before the state educational agency.

Activities at the Local Level

In anticipation of participating in the program adopted by your state educational agency a useful preparatory step would be to examine your school's instructional activities in science, math, and modern foreign languages to determine what the needs are.

It is advisable to develop a complete and accurate inventory of the equipment and materials available to teach these subjects in your school, if one is not already at hand, which identifies the program areas which are inadequately equipped and the additional items that are required. An up-to-date and complete record of the training and qualifications of all personnel with responsibilities relating to the academic fields named above would also be of value.

Another desirable list to maintain is a roster of possible consultants and resource persons in your community, at the state university and nearby colleges, and enrolled as members or serving on the staffs of related professional organizations and their local affiliates, for example, academies of science.

Information which local schools might find it helpful to provide in drawing up a local plan is included in *Standards for Materials and Equipment for the Improvement of Instruction in Science, Mathematics, and Modern Foreign Languages*. This publication—the report of a national conference sponsored by the Council of Chief State School Officers, with the assistance of Educational Facilities Laboratories, Inc., at Michigan State University, November 3-5, 1958, to develop guidelines for use by state educational agencies in implementing Title III—suggests that "each particular school system should develop a local plan upon which its request for reimbursement for purchases, supplies, and materials will be based."

It presents the following outline as "typical of information that might be included" noting that since "the National Defense Education Act provides for reimbursement for part of the purchase price for authorized equipment and materials schools should assure themselves that adequate records are maintained to support any request for reimbursement":

1. Nature of Program
 - a) Scope and sequence in elementary and secondary schools
 - b) Degree of development (status)
 - c) Plans for development and enrichment
2. Staff Personnel
 - a) Teacher competencies
 - b) Supervisory services
3. Pupil Personnel
 - a) Enrollment (total)
 - b) Enrollment in each of the three academic areas affected
 - c) Application of guidance principles in student placement in classes
4. Inventory
 - a) Space and related facilities
 - b) Equipment
 - c) Materials
5. Community Resources
 - a) Facilities available for support of the local educational program
 - b) Specialized personnel

The above report which names some criteria for standards and furnishes bibliographic references as well as reference sources to listings of materials and equipment in the three fields concerned has been distributed to superintendents of schools and elementary and secondary school principals throughout the nation. If no copies are available from your school superintendent they can be obtained by writing to your State Department of Education.

Related Publications

To challenge science department heads,

supervisors, and teachers "to show initiative and vigor in recommending, purchasing, and using the tools of instruction made available by the National Defense Education Act," the National Science Teachers Association, 1201 16th Street, N.W., Washington 6, D.C., has published a booklet on *Action for Science Under NDEA*.

The outgrowth of a conference (October 28-29, 1958) their brochure cites some of the trends in science teaching that have implications for the kinds of science equipment and facilities schools should provide. A pertinent set of principles is enunciated for guidance in connection with each of the following topics: (1) when purchasing equipment or materials on which reimbursement is desired under the Hill-Elliott Law, (2) when undertaking remodeling activities as authorized in this law, (3) when establishing priorities for projects involving science equipment in a state.

The National Council of Teachers of Mathematics, 1201 16th Street, N.W., Washington 6, D.C., has set two committees to work on drafting materials to furnish guidance in utilizing the provisions of the new Act to improve mathematics education. One leaflet will be concerned with the use and procurement of teaching aids, the other will deal with the improvement of supervisory services and how supervisors can contribute to the effectiveness of the new law. There will be a charge for these two publications which will become available late in February.

A reprint from the *Bulletin of the National Association of Secondary-School Principals*, November, 1955, Vol. 39, No. 214, presenting the minimal, good, and superior qualifications for secondary school teachers of modern foreign languages developed by a committee of the Modern Language Association of America may be secured without charge from this organization's headquarters at 6 Washington Square North, New York 3, N.Y.

The response to a questionnaire study of language laboratories in 64 American secondary schools and 240 colleges is summarized in a recent U.S. Office of Education pamphlet on *Foreign Language Laboratories*. Information is provided on such topics as types of equipment used, cost of installation and maintenance, languages taught, instructional methods, and the laboratory approach as a teaching technique. It gives the locations of the language laboratories contributing to the survey. Copies may be purchased at 35 cents each from the Superintendent of Documents, Washington 25, D.C.

Utilizing Other Provisions

School administrators can utilize related features of the National Defense Education Act to heighten the impact of Title III in strengthening science, math, and foreign language instruction. For example they can encourage qualified members of the staff to attend the institutes furnishing advanced training to elementary and secondary school language teachers—both present and prospective—in using new teaching methods and instructional materials to be offered at a series of colleges starting this summer. ■



There is something new under the sun . . .

Something wonderful for you, too →

It's American Seating's New Individual Study-Center*

. . . combining the best features
of a chair and desk in a single,
one-piece movable unit

If you were to sit down and determine all the things a school desk ought to be and ought to have you'd be describing the perfect piece of school furniture. We've done just that and turned it into a reality in the *totally new Individual STUDY-CENTER with Classmate styling.*

There is nothing you can buy that will save more space or provide greater mobility. Yet it's a single, one-piece unit. It's smoothly functional, with desk top adjustable to scientifically determined angles, swivel seat, and fore-and-aft movement.

Because it is designed for good posture and comfort, it reduces classroom distractions to a minimum. It's pleasingly modern, and finished in durable, school-coordinated colors. What's more, it utilizes the most advanced materials of construction to be as vandalproof and tamperproof—studentproof—as modern engineering can devise.

Now. There's much, much more, but the point is this: Better see the exciting Individual STUDY-CENTER before you buy *any* furniture. It costs no more to have American Seating quality for your school. We'll gladly arrange a demonstration. American Seating Company, Grand Rapids 2, Michigan.

*Trademark of American Seating Co.



The standard by which all other public seating is measured

CLASSMATE® SCHOOLFURNITURE • INDIVIDUAL STUDY-CENTERS • UNIVERSAL®
SCHOOL FURNITURE • ENVOY® SCHOOL FURNITURE • BODIFORM® AUDITORIUM
CHAIRS • STADIUM SEATS • CHAPEL FURNITURE • FOLDING CHAIRS AND TABLES

New American Seating Individual STUDY-CENTERS are as fresh and new as all outdoors! Fully adjustable for all school tasks and varying student sizes, their functional design meets the growing need for a truly flexible classroom unit. Photographed at beautiful Florida Cypress Gardens.

Copyright 1959, American Seating Company.

American Seating products are fully covered by patents and patents pending.





NEW CONCEPT IN SEATING . . .

THE INDIVIDUAL
Study-Center



The many design and functional features of the new Individual STUDY-CENTER permit fullest range of classroom arrangement—double rows, alongside walls, or any informal grouping. Tapered front-leg design gives ample leg room and foot room with no standard-feet to interrupt forward movement.



The combination of desirable features in this totally new American Seating classroom unit makes it more than just another desk of advanced design. It is in fact just what its name indicates: a compact, self-contained, *individual study center* designed to meet every need of the student.

Read these vital statistics: *Desk top* adjustable to 8° and 20° for writing or reading; rests level for manipulative tasks. And it's made of non-glare Amerex® (exclusive high-pressure plastic laminate), aluminum-banded, steel-supported. *Book-box* of die-formed steel is exceptionally roomy, adjustable up and down, and the bottom is flat so books stay put and papers won't curl. *Seat* is compound curved, adjusts up and down, moves fore and aft, swivels 45° each way on silent nylon bearings. Curved *back* is self-adjusting, with double-offset back braces, and positioned to encourage correct posture. Both seat and back are of Amerflex, a remarkably tough yet resilient material entirely new to school seating.

By all means, arrange a demonstration of the new Individual STUDY-CENTER, soon. It will reveal what can really be done in school seating when the finest research and design facilities in the business set their minds to it.

**AMERICAN
SEATING** 

The standard by which all other public seating is measured

GRAND RAPIDS 2, MICHIGAN

INDIVIDUAL STUDY-CENTERS • CLASSMATE® SCHOOL FURNITURE • UNIVERSAL® SCHOOL FURNITURE • ENVOY® SCHOOL FURNITURE • BODIFORM® AUDITORIUM CHAIRS • STADIUM SEATS • CHAPEL FURNITURE • FOLDING CHAIRS AND TABLES

Send for free booklet, *The Facts about School Furniture Today*



The Devon elementary school, located in Easttown Township, Pa., one of five in the Tredyffrin — Easttown Elementary Schools, is situated about 20 miles west of Philadelphia. It was designed to house a modern, up-to-date educational program by a committee of staff members, the architect, the Easttown board of education, and the superintendent of schools, Dr. J. Maurice Stratton.

The school contains 11 classrooms for grades one through six plus two kindergarten areas. Future plans call for the addition of a third wing of seven classrooms when the population of the area demands. Thus, the future pupil capacity of the school will be 550 pupils as compared to the present capacity of 375.

Location of Facilities

The classrooms are located in two wings. The north wing contains the kindergarten rooms and primary classrooms (the first, second, and third grades). The south wing has classrooms designed for fourth, fifth, and sixth-grade pupils.

The kindergarten area is located on the extreme end of the north wing. This location allows for a self-contained kindergarten program in the true sense of the word. The rooms have their own

entrances where children are delivered and picked up by the parents. The entrance also leads directly to a play area designed for the exclusive use of the five-year-olds. These rooms are oversized rooms, measuring 34 by 30. They contain two small lavatories, a work island containing a sink with hot and cold water, individual coat cubicles, and a large amount of storage area. In addition to the conventional heating system, these two kindergarten rooms are also heated by means of radiant heating in the floor.

The other classrooms in the primary wing contain two toilet rooms, a work counter with a sink, and, among other features, a wash fountain. The rooms in the south wing are similar in design, have enlarged work counter areas, but do not contain toilet rooms.

All the classrooms other than kindergarten are 31 by 30 in size. The design of the room follows straight lines so that the teacher may arrange the room to suit her needs. Six bookcases are provided in each room. Being movable, they add to the flexibility of the room by permitting the teacher to section off the room as desired.

The Service Areas

Centrally located between the two classroom wings is the service area. This

The Devon Elementary School

WESTON C. OPDYKE

Supervisor of Elementary Education

Tredyffrin — Easttown Elementary Schools, Berwyn, Pa.

The main entrance of the Devon Elementary School, Tredyffrin — Easttown Elementary Schools, Berwyn, Pa. Architect for the school was Howell Lewis Shay and Associates, Philadelphia Pa. Superintendent of the district is Dr. J. Maurice Stratton.



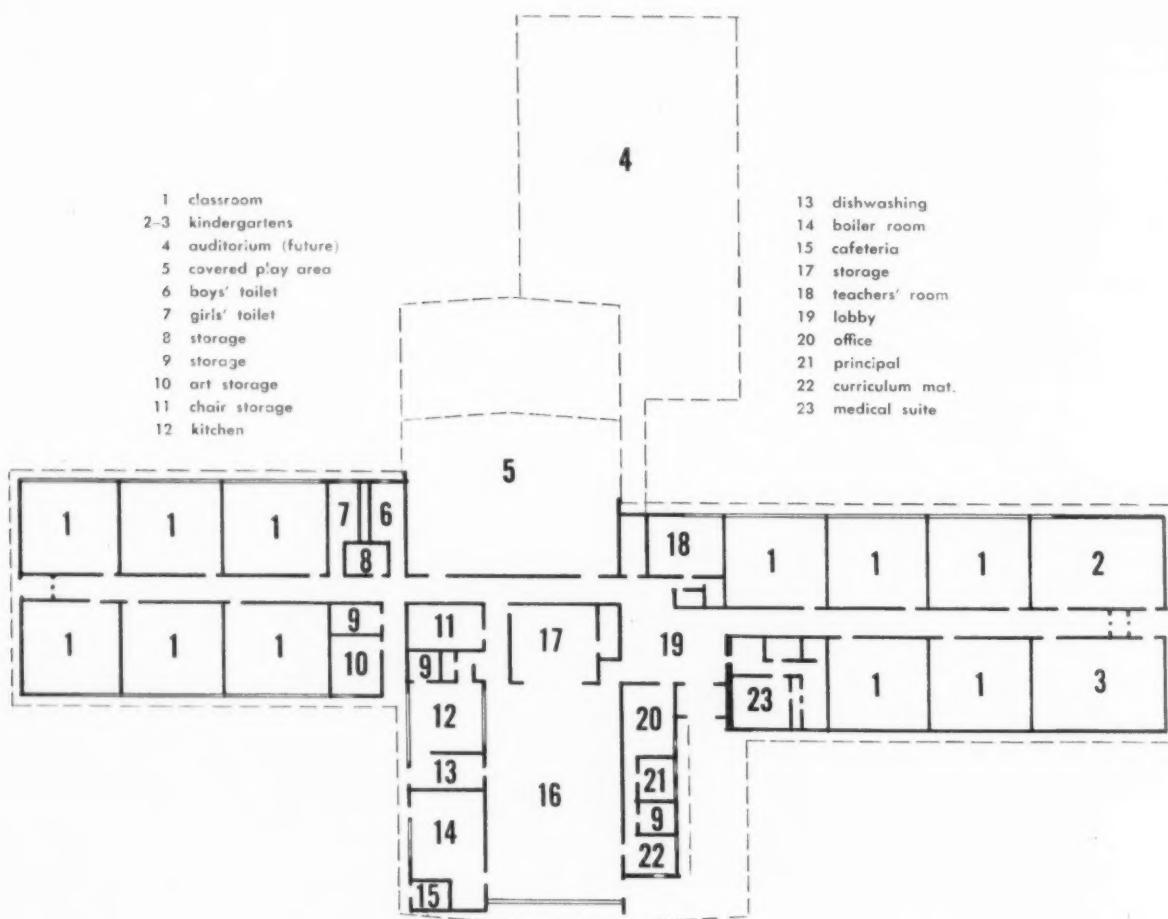
section contains the main lobby and entrance, the administration section, the health suite, the faculty room, and the cafeteria.

The cafeteria is a large pleasant room that serves basically as the cafeteria and auditorium. Located directly off this area is the kitchen with a serving area facing into the room. The tables used for eating purposes are portable and easily moved to a nearby storage area when the room is to be used for an assembly purpose.

A stage, located at one end of the cafeteria, is designed to serve a second purpose — that of a music room. By closing a plastic folding curtain located near the front of the stage, it is possible to convert the remaining area for music teaching purposes, making greater use of the stage area.

The health suite is unique in that it contains a fully equipped dental clinic with a treatment room, darkroom, and a laboratory. The space is provided by the school district; the equipment and services supplied by a local community group sponsoring inexpensive dental care for underprivileged children.

Something different in school construction in the area is the school's all-weather covered play area, which provides the space for a future auditorium as well as providing a healthful, outdoor gymnasium today.





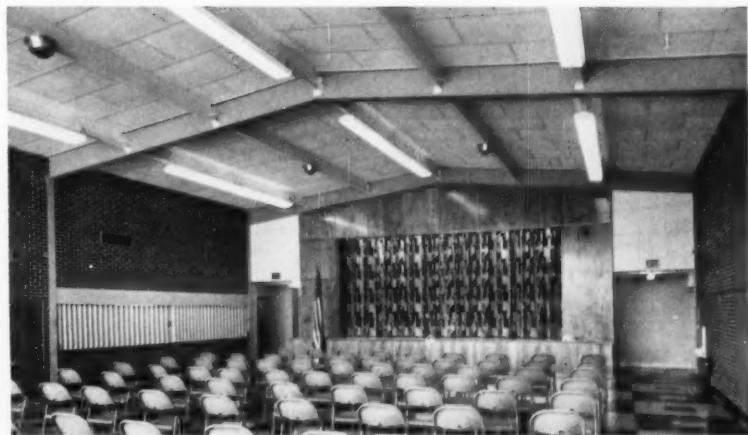
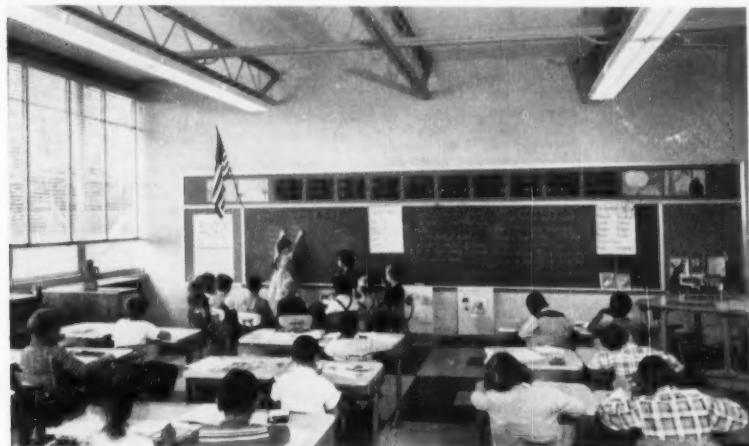
An All-Weather Play Area

An outstanding feature of this school is an 84 by 67 covered play area. It is completely covered overhead with a permanent type roof, 20 feet in height at the peak. This "outdoor gymnasium" is completely open on the west end, partially protected on the two sides by end walls of the classroom wings and completely walled on the side adjacent to the corridor. The floor is of an asphalt-type material. Because of the permanent-type roof structure, it will be possible to convert this area to an indoor gymnasium or playroom at the time the third classroom wing is added to the present building. However, the first months of use of this space as an outdoor protected play area seem to indicate that there are advantages in this type of construction over a conventional indoor gymnasium for an elementary school. Here, our pupils have all the healthful, fresh air advantages of an all-weather playground and the complete facilities of a gymnasium.

The base construction cost of the Devon school was \$1,313 per pupil, and \$15.58 per square foot. The total cost of the school, including site, base contracts, all equipment, and fees was \$527,700. ■



Two views of typical classrooms in the Devon elementary school. The academic areas of the plant have block walls, acoustical tile ceilings with exposed bar joints, asphalt tile floors, and fluorescent lighting.



The cafeteria, which contains a stage, serves both as a cafeteria to feed 360 children and as an auditorium to assemble the students for meetings, plays, etc.

The Hillcrest High School

ROBERT C. GLAZIER

Director of Public Information, Springfield, Mo., Schools

Hillcrest high school, located high on a hillside in the extreme northern part of the Springfield, Mo., School District, has become the second modern new senior high school plant placed into operation in two years to serve Springfield's fast-growing student population in grades 9 through 12.

Planning for the new edifice started immediately following completion of a study of future school populations in 1952, when Willard J. Graff became superintendent of schools in Springfield. At that time, planning was begun on both the new Parkview High School, opened in the south part of the school district in 1956, and on the Hillcrest plant. The original Central High School, which was the city's only public high school for more than 50 years, still is operating at near maximum capacity to serve students in the middle area of the district.

Hillcrest was designed for 1000 students, and that number was enrolled at the school this past fall, its first school year.

Soon after plans to add two high schools were announced, a lay committee

was named to begin the search for a site in 1953. Two years later, on March 9, 1955, the Springfield board of education took an option on a large dairy farm, the future site for the third high school.

A bond issue to finance the new building, along with other school housing projects, was voted on April 8, 1956. Contracts were let for construction of Hillcrest High School on April 24, 1957, and the building was completed on May 14, 1958, at a total cost of \$1,620,000, including the site.

Architect on the project was Richard P. Stahl, the same man who had designed and supervised construction on the earlier Parkview high school in Springfield.

Administrative Areas

A student center just inside the main entrance to the building serves as a reception area and student gathering spot during the school day. At night, the space will serve as lobby both for the present gymnasium and the proposed auditorium which will be added just to the east of the main entrance

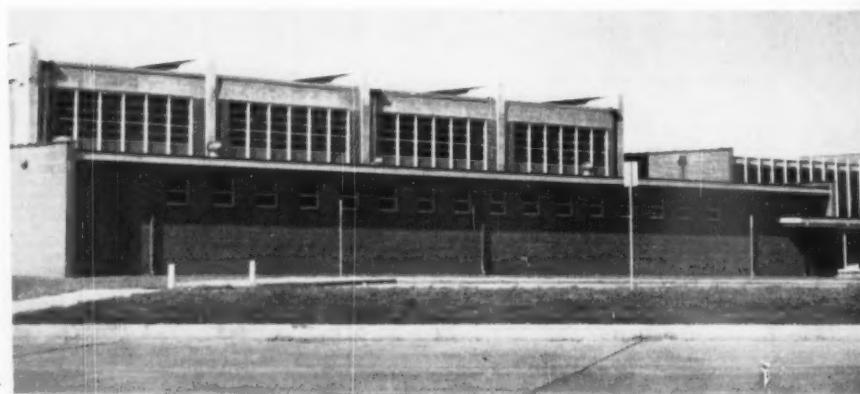
when funds become available. Just north of the student center is a utility area which will double as a small faculty conference room during the school day and as a concession stand for the gymnasium during night functions.

School offices are centrally located just north and east of the main entrance to the school. Located in the office section of the school are headquarters of the principal, assistant principal, deans, counselors, registrar, and clerical staff. Also housed in this area are school records, boys' and girls' health clinics, a small conference room, and the control board for the public-address and bell systems.

The Gymnasium

West of the student center area is the school gymnasium. The gym floor space is divisible into two separate areas — one for boys' physical education classes and one for girls' physical education classes — by large, motorized, folding partitions. A small stage has been added to the west end of the gymnasium to provide facilities for school assembly programs and musical

The brick and porcelain curtain wall exterior of the massive, rambling Hillcrest High school which serves 1200 students in Springfield, Mo. Architect for the school was Richard P. Stahl, Springfield, Mo. Superintendent of schools in Springfield is Willard J. Graff.



—Courtesy Clardige Products



A typical classroom of the 25 general instruction areas of the Hillcrest plant. Walls are concrete block and wood paneling, floors are asphalt tile, ceilings are acoustical tile, and the lighting is fluorescent. Each room has an abundance of chalk and bulletin board.



Well-equipped laboratories, such as the chemistry-physics lab shown above, combines a demonstration and experimentation area in one room. Each laboratory includes a demonstration table, sliding chalkboards, a display case, and an ample equipment and supply cabinets.

functions until funds are available for construction of an auditorium.

The gymnasium's folding bleachers will seat more than 1200 athletic contest spectators.

Just south of the gymnasium are dressing rooms for the boys' physical education classes and for varsity athletic teams. The football practice field and outdoor physical education facilities lie immediately west of the gymnasium. North of the gymnasium are the girls' physical education dressing rooms and the instrumental music suite consisting of a large rehearsal room, instrument storage facilities, practice rooms, and music library.

The Library, Cafeteria, and Shops

North of the school offices are the library, food service facilities, driver education rooms, and industrial education shops. The library, which offers facilities for supervised study, will be supplemented before and after lunch periods by the large dining room which adjoins it to the north. The dining room also may double as an auxiliary meeting room since it has a small stage in one end. The kitchen is located on the west side of the hall, just opposite the dining room, so that hallway space can house lines of pupils waiting to be served at lunchtime.

Located north of the kitchen are two rooms which will house the driver education program which now is compulsory for all sophomores in the Springfield school system. One room serves as a classroom and the other room houses the new drivotrainer units which provide economical and efficient pre-behind-the-wheel training for a large number of students at one time.

Located north of the dining room are industrial education shops, including facilities for training in exploratory



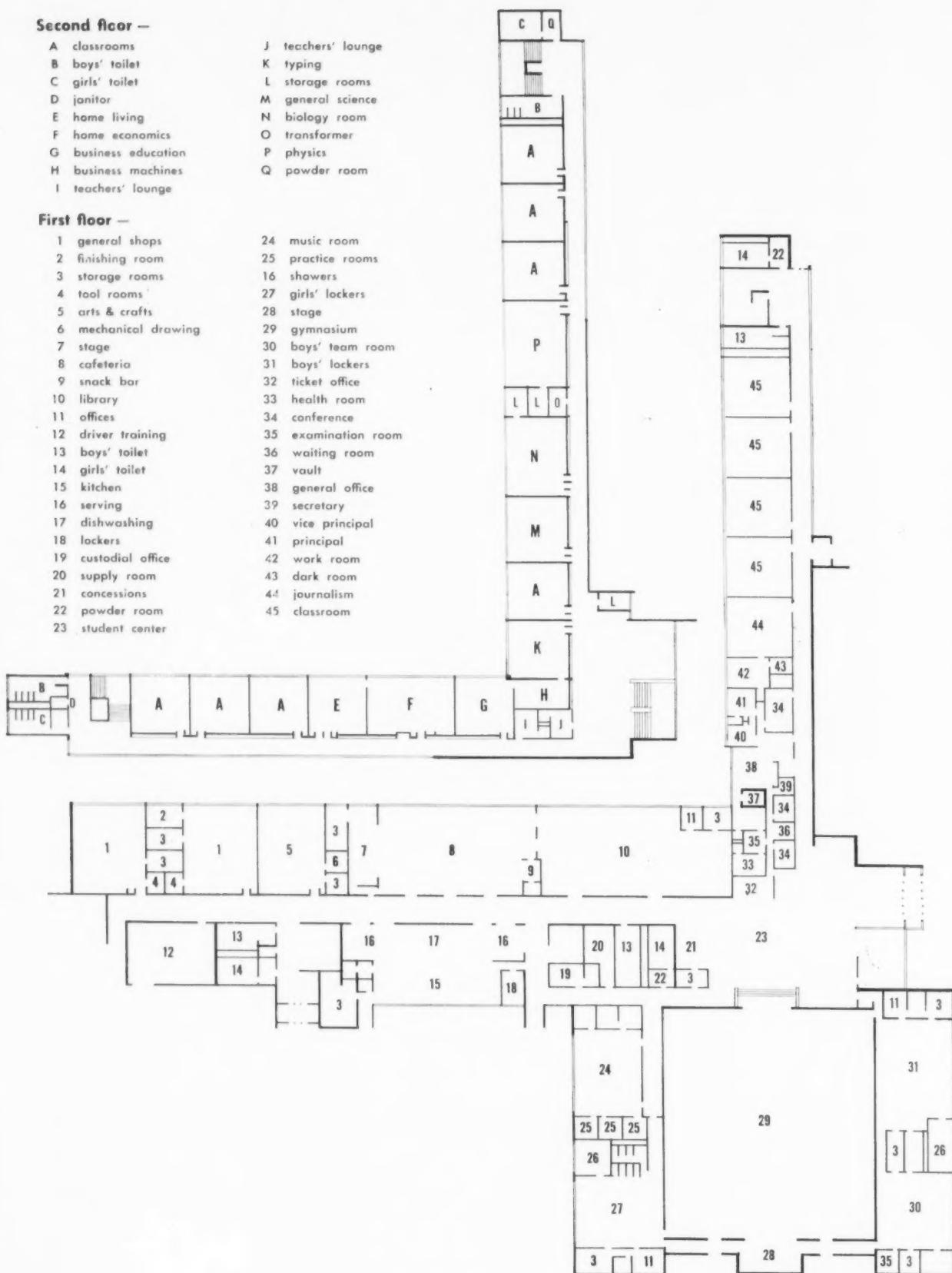
The gymnasium has a folding partition for division of space for simultaneous activities, folding bleachers for 1300 spectators, and a stage at the far end for assembly programs.

Second floor —

- A classrooms
- B boys' toilet
- C girls' toilet
- D janitor
- E home living
- F home economics
- G business education
- H business machines
- I teachers' lounge
- J teachers' lounge
- K typing
- L storage rooms
- M general science
- N biology room
- O transformer
- P physics
- Q powder room

First floor —

- 1 general shops
- 2 finishing room
- 3 storage rooms
- 4 tool rooms
- 5 arts & crafts
- 6 mechanical drawing
- 7 stage
- 8 cafeteria
- 9 snack bar
- 10 library
- 11 offices
- 12 driver training
- 13 boys' toilet
- 14 girls' toilet
- 15 kitchen
- 16 serving
- 17 dishwashing
- 18 lockers
- 19 custodial office
- 20 supply room
- 21 concessions
- 22 powder room
- 23 student center
- 24 music room
- 25 practice rooms
- 16 showers
- 27 girls' lockers
- 28 stage
- 29 gymnasium
- 30 boys' team room
- 31 boys' lockers
- 32 ticket office
- 33 health room
- 34 conference
- 35 examination room
- 36 waiting room
- 37 vault
- 38 general office
- 39 secretary
- 40 vice principal
- 41 principal
- 42 work room
- 43 dark room
- 44 journalism
- 45 classroom



and prevocational courses. Vocational courses in industrial education are offered only at Central High School to all pupils in the school system.

In addition to standard classrooms, the north wing's ground floor level includes a mechanical drawing room and a vocal music room, both located at the extreme north end of the building.

The Academic Areas

The north wing's top floor, in addition to standard classrooms, includes faculty lounges and home-economics foods and clothing laboratories.

Standard classrooms make up most of the east wing, but special facilities are provided for business education, journalism, and science.

The journalism laboratory, which includes a classroom, a small editorial room, and a photographic darkroom, is adjacent to the principal's office on the first level. Located on the second floor, near the point where north and east wings join, are commercial workshops and science laboratories. These have up-to-the-minute equipment, as well as adequate storage facilities.

Bilateral lighting is a feature of standard classrooms in the new school. Since most of the direct light comes from the north, window shades are unnecessary. Lighting from the south is shaded by the single-load corridors and walls which are only slightly above door height between classroom and corridor. Lockers are recessed into the classroom-corridor walls.

All classrooms have acoustical tile ceilings. There are uniform, built-in bookshelves along the south wall of each classroom, and each room also has a teacher's closet, a chalkboard, and a cork bulletin board. The monochromatic color plan in corridors and classrooms emphasizes the use of pastel shades in such a way that floors, walls, ceilings, furniture, and other facilities blend into harmonizing color patterns. ■



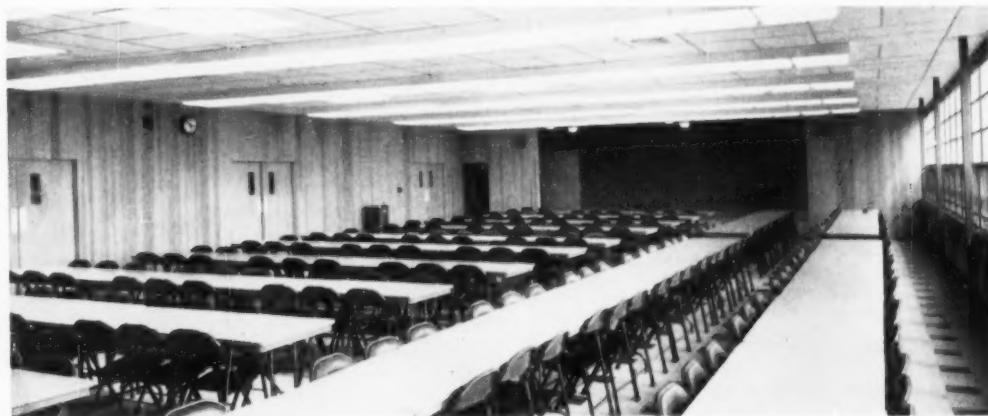
Various types of choral groups can be served by this flexible vocal music instruction room.



One of the two areas in the plant devoted to general shop. The industrial-arts department also has a mechanical drawing room.



The cooking room of the home economics suite which provides for teaching of cooking, sewing, and family values.



Adjoining the library, Hillcrest's wood-paneled cafeteria doubles during the school day as a supplementary facility for supervised study. It also is used as a meeting room and has a small stage at the far end. It has a lunchroom-seating capacity of 300.

Electric Heating and School Design

The search for true economy in school planning has led many growing communities through unexplored jungles of materials, plans, facilities, products, and ideas. And, occasionally from this tangle springs a development that makes the hunt a success. When the possibility of electric heating reared its curious head, the Utica, Mich., school board gave chase and captured an economy worth discussion around the school board table.

The school district needed two elementary buildings with identical requirements and began casting about for economical, but adequate, plans. From some now forgotten corner came the suggestion that an electrical heating system be considered. For us, as architects on the project, the thought immediately started manufacturing questions, particularly since our area does not benefit from low-cost public power.

To begin, the architect must integrate materials, construction techniques, engineering requirements and, most important, human needs into the ultimate design of the school building. He must consider the factors of function, environment, and finance as they relate to the particular school project. The possibility of electric heating was a new tool to add to our kit in hopes it would implement the educational aims of the school system. But we had to subject this tool to a few tests before we could wield it with confidence.

Efficient Design

We first recognized that electricity is high cost heating energy. This meant that maximum efficiency had to be derived from the system as a first step toward practicability. When we looked at the well-accepted "finger plan" and the popular designs that feature many

Why electricity was selected for heating this school and how this heating method affected the plant's design —

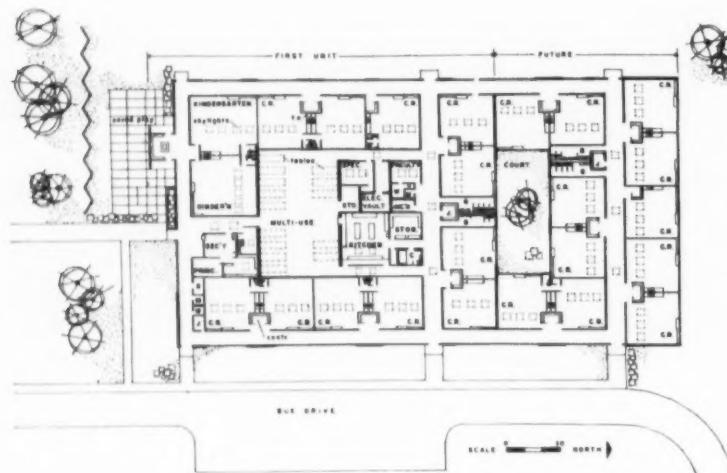
NEAL B. SMITH

Smith and Smith, Architects
Royal Oak, Mich.

"interior courts," it was obvious that they have a high ratio of outside surface to the inside space. Geometrically, neither can be considered efficient, and thermally, the excess surface just adds to the heat loss. So our first architectural conclusion was that electric heating called for a simple and compact building.

When we treated equivalent "finger" and "rectangular" plans to a mathematical analysis we came up with some statistics that set the compass even more accurately. The rectangular plan saves 13.5 per cent of the perimeter wall and yields 15.5 more teaching area per student. This left little doubt that the rectangular shaped building is more economical to construct and to heat. And, there are many who believe that greater educational efficiency exists in this familiar old shape.

Up to this point we had been rediscovering a few things about architectural shapes, but we were also mak-



An architect's perspective and the floor plan of the electrically heated, new elementary school plan in Utica, Mich. Several schools will be constructed from the general design. On the floor plan, note the "electrical vault" located near the center of the plant. The small size, in contrast to the larger boiler room needed for other types of heating, furnished space for an extra classroom. Superintendent in Utica, Mich., is Fred Atkinson.



ing studies on equipment and construction costs. Everything indicated a potential savings if the usual hot-water heating system and boiler room were replaced by electrical heating equipment. From these savings, however, we had to subtract additional insulation costs and foreseeably higher costs of operation.

Heating Costs

Still on the cautious side, we asked for and received bids for both heating methods in buildings properly designed for each. In both cases we had the same floor area, but in the design for electricity, the absence of boiler room requirements allowed us to accommodate an additional 30 pupils. Our specifications for the electric heating plan included an extra six inches of glass fiber insulation in the ceiling.

Resulting bids confirmed our preliminary thinking. There would be little difference in initial building costs, the electric plan costing about one cent per square foot more. But, because we could use the heating plant area for classroom space, we obtained a greater pupil capacity in the electrically heated building. So the cost figure that was most significant was the cost of each system per pupil. When we divided the cost of each plan by the number of students each building would accommodate, we found that the electrical system would save \$56 per pupil in construction costs.

We had recognized from the start that the use of electric energy would make operating costs high. Our calculations set the difference at \$1.53 per student per year more than the hot-water system would require. But, by dividing this into the \$56 per pupil saving in construction, it would be about 37 years, or about the normal life expectancy of the building, before electric heating would actually cost more. And when we looked at the cost trends, we found that electricity rates have been declining and oil costs rising for many years. If these trends continue, heating costs per unit of heat should be equal in 10 to 20 years with electricity being more economical from that point on.

There are certain other intangible factors that add to the desirability of electric heating. Depreciation schedules of hot water heating equipment show shorter life than those for electric equipment. Also, it's easier and less expensive to replace and maintain electric equipment. In the event of expansions, additional KWH of energy will cost the minimum current rate so that the average energy cost will steadily decrease. When we add to these things the fact that maintenance personnel requirements are reduced, everything points to a long run economy in the use of this heating method. ■

a critical analysis

The Financial Accounting Handbook

The publication last year of "Financial Accounting for Local and State School Systems" by the Office of Education, U. S. Department of Health, Education, and Welfare was a first step in the right direction. Unfortunately, it was a rather timid and hesitant step. The culmination of two years of effort by school administrators should have resulted in a major contribution in the field of school accounting and business administration. For several reasons, it falls short of the mark.

A school district is a unit of local government. Its purposes differ from those of other local governments, but its political position is clear. As a unit of local government, a school district's accounting system should conform to recognized governmental accounting standards, so long as conformity to these standards does not interfere with the aims and policies of the district.

The "Financial Accounting" handbook serves one purpose well. For a long time, the desirability of standardized terminology

and accounting usage among the states has been recognized. If the outline of accounts presented in the book is followed consistently, uniformity in recording and reporting will certainly be promoted.

Incomplete Handbook

The handbook's weaknesses lie in the fact that it does not go beyond the outline of expenditure and revenue accounts and a discussion of items to be charged or credited to them. It cannot be considered a complete accounting system. On page 24, the book indicates that the system can be used for either the cash or the accrual method of accounting. Apparently no one thought to explore the ramifications of this statement. Even an accountant unfamiliar with the requirements of a governmental accounting system will recognize that the accrual method of accounting entails the use of receivable and payable accounts. How is one to accrue expenses at

(Concluded on page 52)

The handbook, "Financial Accounting for Local and State School Systems," an important step in the right direction, is treated here to a critical analysis that pinpoints some areas for future revision and supplements —

MORRIS F. BAUGHMAN
Examiner, Tucson, Ariz., Schools

the AMERICAN SCHOOL BOARD JOURNAL

An Independent Periodical of School Administration
William C. Bruce, Editor

THE PRICE OF EXCELLENCE

THE New York State Board of Regents, in a lengthy statement on the pursuit of educational excellence in New York State, suggests the importance of continued striving for improved educational service:

The high quality of education to which we must aspire in these times cannot be achieved without sacrifice. Substantial increases in financial support are inevitable. This is said in full recognition that not all problems of education can be solved simply with the provision of more money.

It is the responsibility of each community, each school board member, each administrator, each teacher—of everyone concerned with education—to see to it that the greatest possible return is received for each dollar spent. This responsibility requires the maintenance of high standards of performance, the elimination of inefficiency, the utilization of new techniques, the elimination of unnecessary and outmoded programs.

But even the wisest and most successful exercise of this responsibility cannot obviate the need for more money for education. The Regents appreciate fully the added responsibility which must be assumed by the taxpayers of the state in financing the program set forth in this statement.

The cost of education is great but so are the benefits. The benefits of good education, the strength it imparts to us as individuals and as a nation, were never more important or more needed than now.

Any retrenchment of educational support is unrealistic. Equally unrealistic is a program of support which merely "holds the line" because such support cannot bring necessary improvement. Indeed, there can be no "holding the line"—to remain static in this rapidly changing world is to retrograde. The only answer to the demands of our age is a program which provides for a raising of the level of quality of our educational system to true excellence.

The pursuit of excellence is difficult and the price of excellence is high. But the Regents believe as they stated last year that "the people of this state, weighing both need and cost, will again furnish the needed support for an educational system appropriate to our times."

WRITTEN SCHOOL BOARD POLICIES

DURING the past five years particular attention has been paid to the problem of writing out the policies of school boards in small as well as in large school districts. The interest in the process of making a permanent record of existing policies has been due largely to the National School Boards Association. At present, we are witnessing three interesting aspects in this movement.

1. Communities which have had written rules and regulations for decades, have been engaged in taking a second look, and have widely revised their statements to fit the new conditions due to enlarged organization and administrative set-ups. The most important changes are resulting from the improved attitudes, as well as the efficiency of the board of education members, and of the school executive staffs.

2. The idea of written policies is being extended to small communities where the chief executive has been unwilling to be tied down to definite policies which can be recalled and used by the board members, the principals, and the teachers. The argument used by some of the superintendents in such schools has depended largely on the idea of flexibility or prompt adjustment to new situations and needs. In most

cases, however, the argument advanced has not been the real reason. There still is among some schoolmen an autocratic approach to the direction of teachers and a completely undemocratic attitude toward the board and the parents.

3. In large cities there has been a useful attempt to write special statements of policies for certain departments of the school system. In such communities the over-all statements of the board represent a form of legislation which is necessarily very general and not readily disturbed without far-reaching affects. The board itself and the superintendent cannot enter into consideration of minutiae of policy and rules relating to such departments as the high school athletics and its numerous activities, the vocational education and industrial-arts shop programs, the cafeterias, the writing of specifications and other plans and methods of purchasing in special areas, etc. These special statements can be prepared only by the department heads and teachers and other employees. They do need to be reviewed by the chief school executive and a committee of the board of education so that they fit into the over-all policies of the local school system and its responsible board.

BETTER CLASSROOM PLANNING

THE steadily changing and improved practices in school organization and teaching method are continuing to require better planned classrooms and better general layouts of school buildings. A major unsolved problem of schoolhouse planning is that of flexibility, which will make the classrooms and the buildings in general more readily adaptable to changing views of teachers and administrators. An idea of the nineteen-twenties that classroom partitions should be made movable has not proved satisfactory, and triflingly few buildings with walls of this type have been radically remodeled to adjust classroom sizes to changed conditions.

The more recent proposals to enlarge elementary classrooms from 800 to 900 square feet to 1100, and even to a king-size 2000 square feet, seems completely unsatisfactory because of acoustical and disciplinary problems which the very size of the rooms will impose on teachers. It is difficult to understand how a class of 25 to 30 children can work in such a vast room without losing rapport with the teacher.

In high schools, large classrooms may very well be provided for groups of 60 to 100 pupils when the lecture method and some of the new audio-visual devices are used in instruction. For academic subjects taught to secondary classes of 25 students, room areas of more than 900 square feet are difficult to justify.

So far as changes in school organization and teaching can be foreseen, the size of elementary and secondary classrooms has approached a maximum that is educationally and economically defensible. Improvement can come from better shapes, care in the location of doors and windows, the use of lighting fixtures, and other services that avoid a cluttered look. Ample flexibility can be attained by the use of movable storage and bookcases, the selection of educationally serviceable chairs, desks, and tables.

The current unwarranted demands repeated in certain popular magazines for economy in new school buildings unquestionably will lead school boards to avoid costly experiments in classroom forms and unique building plans. The "break through" in improved school building planning urged about ten years ago has occurred to a degree that both school authorities and architects will content themselves temporarily to seek refinements that result in improved teaching situations, without increases in total costs, or even unit costs.



Your whole school is

Happy with GRIGGS

GRIGGS TEMPO DESK NO. 900 WITH 940 CHAIR

Students and teachers enjoy Griggs clean Tempo styling that makes classrooms bright and cheerful. Superintendents, business managers, and school boards like the all-welded construction, infra-red baked enamel finish, plastic tops and hardwood plywood or Fiberglas seats and backs that make Griggs desks and chairs almost indestructible. Ask your Griggs distributor to show you why Griggs seating is your best buy.



TEMPO STUDY TOP DESK
NO. 985 A-G



CHAIR DESK
NO. 450



THIS TEMPO
SET is a classroom favorite. Tubular steel all-welded frames. One piece embossed steel book box with smooth rolled edges. Plastic desk top is 18" x 24". Heights 20" to 30". Chairs come in 8 proportioned sizes. Colors: Beige, Dove Gray, Sage Green, Coral, Ocean Blue. Write for Catalog.



Visit the
AASA Exhibit,
Atlantic City,
Feb. 14-18

GRIGGS EQUIPMENT, INC. BELTON, TEXAS
PLANTS IN BELTON, TEXAS AND SELMA, NORTH CAROLINA

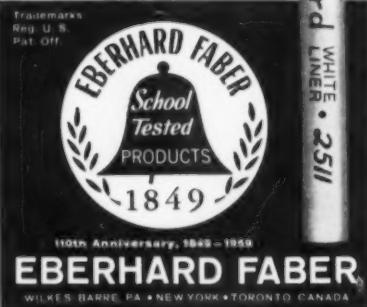


CHALK UP WINNING CLASSROOM WORK

WITH THE NEW
EBERHARD FABER
SCHOOL TESTED
PRODUCTS

CHALKBOARD White Liner Pencil is teacher's helper for all classes. Perfect for music scores, maps, charts and for drawing semi-permanent guide lines on blackboards. Chalkboard marks remain while ordinary chalk is removed. Resists water but can be erased by a conventional eraser like Eberhard Faber's Rubkleen.

CHALKBOARD is just one of the top grade values in Eberhard Faber's new line of School Tested Products. Write for information on complete line of ball pens, quality pencils, teacher aids and drawing materials: Education Dept., Eberhard Faber Pencil Co., Crestwood, Wilkes-Barre, Pa.



THE ACCOUNTING HANDBOOK

(Concluded from page 49)

the end of a period without using Accounts Payable or Vouchers Payable? How can revenues be recorded when earned, rather than when received, if no provision is made for Accounts Receivable, Taxes Receivable, and the like?

In fact, in the case of an autonomous district with authority to receive, hold, and disburse its own funds, where does one enter Cash when it is received? This leads into another defect of the system. On page 24 the statement is also made that the accounts are to be used with the single entry method or the double entry method. Let us attempt to use the double entry method, and record the receipt of \$100,000 from property taxes. In a formal governmental accounting system, full accrual, the entry would be as follows:

Dr.	Cr.
Cash	\$100,000

Taxes Receivable \$100,000

In the outline of accounts presented in this handbook, the credit could be made to Account No. 11, Taxation and Appropriations Received. There is no asset account appropriate for recording the debit member of this entry. An entry made to only one account certainly does not represent the double entry method.

Several Serious Shortcomings

There are other serious shortcomings which prevent this from being an accounting system. Most school districts, in common with most governmental units, use some type of voucher to authorize payments. In a formal governmental accounting system of any degree of complexity, the voucher system is used. These two sentences do not mean the same thing. Use of the voucher system involves recording of a liability when the voucher is approved for payment, and recording the discharge of the liability when a warrant or check is drawn in payment of the items included in the voucher. The voucher system is also used extensively in business as well. No provision has been made in the accounts for vouchers, however, even though vouchering of invoices is a necessary part of the procedure in most districts.

Another serious omission from the chart of accounts is the leaving out of an Encumbrances Account. It is necessary for a school district of any size to keep a record of obligations against the budget arising from purchase orders, contracts, or other agreements which will lead to later expenditures. These accounts make no mention of Encumbrances. It is true that these can be kept as a subsidiary record, as can Vouchers Payable and Accounts Payable. If an accounting system is to be recommended for the use of every school district in the United States, however, why should it not include these essential aspects of governmental accounting, so that the

formal accounts will always reflect the exact condition of the budget and the outstanding obligations of the district?

We acknowledge the fact that schools are big business. Yet what big business exists without an account in its books to record net worth? In a governmental unit, net worth is recorded by the use of Unappropriated Surplus account, together with surplus reserves such as Reserve for Encumbrances. Not one net worth account can be found in this chart.

An attempt has been made in this handbook to provide an account for the retirement of term bonds. Under the Sinking Fund account are listed three sub-accounts, Money Received From All Sources, Money Paid Out for Bonds, and Interest on Bonds. We might ignore the fact that a sinking fund is established solely for the retirement of bonds and should not be used to handle interest payments. The fact remains that sinking fund management is a very special branch of governmental accounting. An accumulation schedule must be constructed and periodic entries made in the sinking fund accounts as required by the schedule, so as to keep a constant check on the adequacy of contributions and earnings. Assets of a sinking fund are invested, and the earnings on those investments must be accounted for. There are at least two ways that sinking fund contributions are acquired by the fund—by periodic contributions from another fund and by direct tax levy. The sinking fund itself has a net worth, which must be adjusted for excess or deficient earnings when these are recorded. Lumping all these possible transactions into Money Received and Money Paid Out puts one in mind of the currently popular book, slightly paraphrased: "Where Did It Go? Out."

Extensive Supplements Needed

The points covered above are only major topics. There are many others, some perhaps more important than those discussed. It can hardly be argued that the compilers of the handbook intended the individual school district financial officer to supplement the chart of accounts as needed. The supplement in many cases would entail whole groups of accounts, of at least as much importance to a complete system as those listed.

It is obvious and regrettable that no accountant familiar with any phase of governmental or institutional accounting was consulted in the preparation of this manual on accounting. The American Institute of Certified Public Accountants has instituted a committee study of the entire field of public school accounting. Could the publication of this handbook, under study and discussion for so long, have been delayed until this group had made a report, it would no doubt have emerged as a clear textbook promoting uniformity, completeness, and better understanding for our school accounting and financial records. ■

PROOF THAT

HeyWoodite

LIVES UP TO ADVERTISED CLAIMS AS
"AN INDESTRUCTIBLE MATERIAL"

Unretouched photos show how
HeyWoodite withstood
fire at the Palmyra Public School

"...the only things
that could be salvaged
were these desks"

Palmyra Public Schools
Palmyra, New Jersey

I. NEWTON COWAN, ED. D.
SUPERINTENDENT

February 10, 1958

Mr. Carl Lugbauer
Heywood-Wakefield Co.
Gardner, Mass.

Dear Sir:

Enclosed you will find photographs of the Heywood-Wakefield study top desks which were salvaged from our recent fire. The one photograph shows one of these desks before it was properly cleaned, although it had been washed previously. The others show the desks after cleaning and in use.

These desks are now in the temporary classroom in the locker room of the field house. The room from which they came was not completely destroyed by fire, but the only things that could be salvaged were these desks.

After our experience with your solid plastic and chrome furniture, we feel that it is practically indestructible.

Sincerely yours,

J. Newton Cowan
I. Newton Cowan
Superintendent

INC:MLM
encls.

SCHOOL FURNITURE DIVISION
HEYWOOD-WAKEFIELD COMPANY • MENOMINEE, MICHIGAN



DESK TOP AFTER THE FIRE



SAME DESK TOP AFTER WASHING

Dr. Cowan
has not
solicited pay
for, nor has he
been paid for
the use of this
letter or the
accompanying
photographs.



POUND FOR POUND...

Champion of the Class

The new R. C. Allen VisOmatic typewriters boast a built-in ability to take the heavy pounding and carriage-banging treatment of classroom use.

This day-in, day-out dependability . . . greatly reducing maintenance costs . . . makes the R. C. Allen VisOmatic the most preferred, practical and economical school typewriter investment.

But there's more, much more, to this new R. C. Allen VisOmatic. There's a new dual built-in card holder . . . fully automatic VisOmatic margins . . . New automatic bail . . . Velvet touch keyboard . . . Removable platen . . . Finger tip tab set and clear buttons . . . Half space escapement and margin justifier . . . plus 7 soft-tone, office-matching decor colors to choose from. Ask your local R. C. Allen dealer for a VisOmatic demonstration today.



R.C.Allen
Business Machines, Inc.

688 FRONT AVE., N. W., GRAND RAPIDS, MICH.

Adding Machines • Bookkeeping Machines • Cash Registers
• Typewriters • Sales and Files • Carbon Paper and Ribbons
• Precision Aircraft Instruments



YELLOW
PAGES

Here's the inside story

— why Krueger chairs give Better Service and Longer Life



- Deep, form fitting correct posture backrest for full back support. Roll-beaded bottom adds support — eliminates dangerous sharp edge. Frame is heavy 18 gauge electrically seam welded tubular steel.

- Double action folding safety hinge cannot pinch fingers — provides simplest single action folding operation available.

- Strong, solid steel rods support frame folding action — serve as seat supports, add frame strength—prevent seat from accidental tipping.

- Built-up vertical frame strengthener seat spacer on front legs provide stronger, more rigid bearing points for seat pivot rod — safeguard against frame spreading and accidental collapsing — increase over-all strength.

- Large, comfortable contour seat has front edge slope and full rounded corners to ease sitter's leg tension. L-shaped, securely welded steel bridging plus roll-beaded bottom edge provides added support and strength.

- Long wearing, beige color Super-Dylan high compression molded feet provide non marring floor contact.

- Leg stretchers of heavy gauge tubular steel securely welded to frame add strength, solid rigidity and permanent security. No. 101 at right shows complete shape and style.

Chair shown is our series 100. Others in line boast similar structural features for enduring long life.



Demountable CHAIR TRUCKS

Seven standard sizes hold both X-type channel or Y-type tubular chairs — upright or horizontal. Regular or under-stage models. Demountable ends and exclusive changeable frames permit stacking empty trucks one on the other.



New Catalog shows complete line of chairs, tables and trucks.

All-Purpose TABLES TOO!
Heavy-duty, yet light-weight tables with folding legs. Ideal for every purpose, they come in choice of two finishes and four sizes. Easy to carry; easy to stack and store.

KRUEGER
METAL PRODUCTS • GREEN BAY • WISCONSIN

SCHOOL BOARD JOURNAL for FEBRUARY, 1959

(For more information from advertisers, use the postcard on page 79)

PERSONAL NEWS



Mrs. M. L. Hale, member of the San Diego, Calif., school board for more than 25 years, has resigned on the advice of her physician. First elected to the board in 1929, Mrs. Hale has held the office of board president for six one-year terms. Acknowledging her long and outstanding service, the board and administration awarded her the title of president emeritus, the first time the board has made such a designation.

CONNECTICUT

Thomas E. McBride has begun his second term as president of the Hartford board.

A. S. Lahn has accepted the position of business manager of the school system at Stonington.

IDAHO

Irwin T. Stodder is the new superintendent at Blackfoot.

KENTUCKY

J. C. Eddlemon is superintendent of schools at Stanford, where he succeeds J. T. Embry.

MICHIGAN

Donald Kelso is the new principal of Banner School, Spaulding township. He succeeds Alvin Thomas who has gone to Shields.

Raymond J. Lukers is the new superintendent at Hamilton.

Maurice Pernert is the new superintendent at Holt.

MINNESOTA

Len Miller has taken the superintendency at Elkton.

Earl Vitalis is the new superintendent at Kasson.

Arthur Ranheim has taken the superintendency at Frost.

Veir W. Wood is superintendent of Dist. 272, Eden Prairie. He succeeds Harry Hulls, who has taken a professorship at South Dakota State College.

The board of education at Waterville has reorganized with **Roland Steinhous** as chairman, **Earl Fritz** as clerk, and **Don Werner** as treasurer. Directors are **Don Sneller**, **Willard Goltz**, and **Joe Sleckton, Jr.**

MISSOURI

P. J. Newell, Jr., of Cape Girardeau, has taken the superintendency at Farmington.

H. A. Sadler is the new superintendent at Paris.



Dr. Carl E. Wagner, superintendent of the Hickman Mills, Mo., school district, was honored recently as "Man of the Year" by the local Optimists club for his leadership in building the new multi-million Ruskin High School and in sponsoring extensive modifications in his district's instruction program in less than two years of service.

NEW MEXICO

C. O. Walker, of Farmington, has been elected president of Dist. 1 of the New Mexico School Boards Association.

PENNSYLVANIA

Herbert England has assumed his duties as superintendent at Easton.

Jasper Falvo is the new president of the Duquesne board.

Dr. George R. Walter has been elected president of the Johnstonstown board.

Thomas W. Hogan is the new president of the Scranton board.

Mrs. Ray Balsley has been re-elected president of the Connellsburg board.

Dr. Emil J. Bartos is the new president of the Reading board.

Dr. Irving Bennett has been re-elected president of the Beaver Falls board.

SOUTH DAKOTA

Wilmer Herbold has taken the superintendency at Alcester.

TEXAS

Jesse K. Denson is the new superintendent at Gallatin.

L. M. Hayes is the superintendent at Stanton.

Billy J. Roberts is the new superintendent at Windom.

A. R. Downing is acting superintendent at Waco.

The University of Houston's College of Education, Houston, Tex., has established a Bureau of Education Research and Services. Director of the Bureau is **Dr. Lester S. Richardson**, formerly superintendent at College Station, and Cuero, Tex.

Robert Ashworth is the new superintendent at Amarillo.

O. V. McDaniel is the new superintendent at Angleton.

NEW FAST SERVICE

ON LABORATORY
FURNITURE FROM
FACTORY STOCK



STUDENT TABLES
INSTRUCTOR'S DESKS
FUME HOODS

STORAGE ASSEMBLIES
LAB. ACCESSORIES
AND EQUIPMENT

ORDER THIS HIGH QUALITY
FURNITURE FROM THE NEW
KEM TECH SCIENCE FURNI-
TURE CATALOG, it is priced
on the basis of large production
runs, and you receive substan-
tial cost savings with no sacrifice
in quality. It will pay you to in-
vestigate this flexible line for
any science room requirement.

Write for your free copy of this
catalog today!

KEWAUNEE
Mfg. Co., 5009 South Center Street, Adrian, Michigan

TECHNICAL
Furniture Inc., 3001 W. Front St., Statesville, N.C. Carolina

TEACHER UTILIZATION

(Concluded from page 26)

by public opinion. Until the professional standing of the educational practitioner is recognized, everyone who has ever been in a schoolroom will feel quite competent to speak as an expert on what should be done.

The basic question concerns the number of methods or ways in which a classroom, or school, can be operated and still achieve the essential goals. As indicated above, the current guess is that there is more than one way to generate learning. There is also an opinion that a multiple approach will only confuse the child. Instead, a simple, unitary method is needed. These people would return the school to "basic fundamentals," and drastically limit the scope of its operation.

Here again, there is a need for definitive investigation. It is certainly possible that both sides may be correct. Some children may need the stimulation that results from the multiple attack. They are able to profit from a freedom to explore. On the other hand, some children may need a restricted approach in order to encourage concentration on a smaller area.

Another problem, perhaps only a ghost that must be exorcised, is the not uncommon opinion that learning, to be profitable, must be at least unpleasant and perhaps

even painful. This is an echo of the belief that good medicine must have an evil taste. Modern medical practice, particularly pediatric, does not subscribe to this belief.

While analogies of this sort seem to make an answer obvious, it may not be the correct one. Here again, it will probably be necessary to study the situation under controlled conditions. It may be that there is no one right answer but that there is a need to match children and methods. This possibility raises some serious problems in school operation. A need for stratified pupil assignment would greatly complicate the administration and would require an extensive program of public relations.

Closely related to this possibility is the question of the right of the parent to select the type of education that his child should receive. Outside of school, the views of the parent will largely determine whether the child will face a world that is fundamentally hostile, rigorous, or opulent. However, he has but little choice at the present time on whether his child will have a strict or permissive teacher, whether the classroom will be traditional or progressive in its operation. Certainly a request that his child be assigned to another teacher whom he believes to be "better" would not receive a joyous welcome.

Answers to these questions, upon which administrative decisions regarding teacher utilization may be based will require sev-

eral pieces of information. First is the question of the extent to which the teacher, as a professional practitioner, can alter the development of the child. As a part of this, the administrative climate resulting from the organization, the rules and their enforcement, the facilities, supplies, and equipment available in the classroom may also play a definite role.

When the limits of the possible effects have been delineated by careful research, decisions will have to be made on the duty of the school. Does the school have a responsibility, or even a right, to work with the personal adjustment of the child? Must it limit itself to presenting a hygienic environment for acquiring academic learning? To what extent may it attempt to mold the interests of the child? It may be that when the limits are known, it will be desirable to establish a professional team made up of various specialists of which the teacher will be only one.

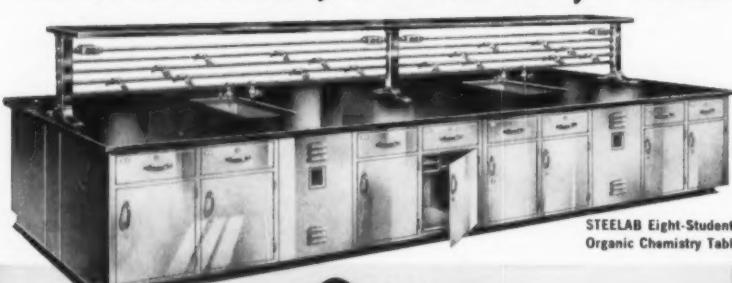
Another possible result of investigations into the problems is a rescheduling of school time. Questions of how much instruction and how often, are inevitable. Here again, one of the great battles will be in the area of public opinion. Even though it may develop that instruction during the afternoon would be inefficient, or that a long summer vacation would result in tremendous losses, the traditions may continue for some time. ■

ONLY STEELAB

can give you

SCHOOL SCIENCE FURNITURE

Economical, Noiseless, Maintenance-Free



STEELAB Eight-Student
Organic Chemistry Table

It may surprise you—STEELAB school science furniture is more economical, too! Compare it feature for feature with old-fashioned wooden furniture, even other brands of steel furniture. STEELAB gives you MORE...and actually costs you LESS. Patented, exclusive safety features...rugged, sound-deadened steel construction...bonderized for lasting, maintenance-free finish...STEELAB adds up to a sensible, lower cost investment for your school.

Write today for Complete
STEELAB Catalog No. 59E-B2

**LABORATORY
FURNITURE
COMPANY INC.**

Since 1920—Over 50,000 Installations • MINEOLA, LONG ISLAND, N.Y. • PHONE: Pioneer 2-3600

STEELAB Ruggedized Educational Science Furniture—Built with the Beauty and Strength that only Steel can give





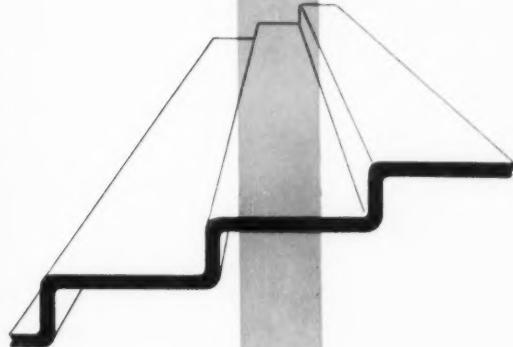
Pittsburgh-
Des Moines

STEEL DECK GRANDSTANDS

Unit-section design flexibility for Stands meeting
every school requirement of layout and capacity

THE
SAFETY
OF

STEEL



Full details, data and pictures in free 24-page brochure. Write.

PITTSBURGH • DES MOINES STEEL CO.

Plants at PITTSBURGH, BALTIMORE, DES MOINES, SANTA CLARA, FRESNO, and STOCKTON, CALIF.
PITTSBURGH (26).....3429 Neville Island DES MOINES (8).....929 Tuttie Street
NEWARK (3).....1795 Military Park Bldg. DALLAS (1).....1228 Prestonian Bldg.
CHICAGO (1).....619 First Nat'l Bank Bldg. SEATTLE (1).....Suite 319, 500 Wall St.
EL MONTE, CALIF.P. O. Box 2012 SANTA CLARA, CALIF.618 Alviso Road
ATLANTA (5).....361 E. Peters Ferry Rd., N. E. DENVER (2).....323 Railway Exchange Bldg.
BALTIMORE (26).....Curtis Bay Station



ONE STANDS OUT

To this young lady, the coming years mean many things, yet undreamed...her first day in kindergarten...her last day in college. These are just two of the reasons for the scientific design of Virco school furniture, and of course, there are many reasons during the years between.

Virco is dedicated to the manufacture and sale of school furniture that offers the ease of studying comfort and rugged durability during the school years. In addition to contemporary styling and quality construction, Virco gives you an important extra with every unit of school furniture you buy...It's Virco's "Customer Satisfaction Guarantee." Ask your Virco representative about it today...and get your Free Copy of the new Virco School Furniture Catalog, illustrating Virco's kindergarten-through-college line, in full color and with complete specifications, or write or call: Virco Mfg. Corp., P.O. Box 44846, Station "H," Los Angeles, Calif. or Virco Mfg. Corp., Conway, Ark.

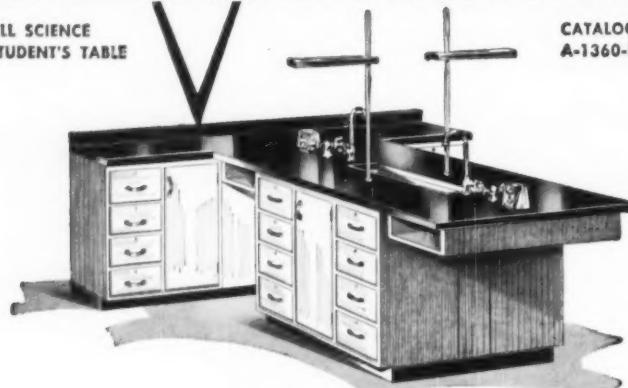
VIRCO



Reprints of this page, suitable for framing, are available
free upon request, by writing to Virco Mfg. Corp.

Quality FURNITURE for all SCIENCE LABORATORIES

ALL SCIENCE
STUDENT'S TABLE



CATALOG NO.
A-1360-EC

These new perimeter type tables offer unlimited design possibilities and arrangements from standard interchangeable base units. They provide numerous advantages for new construction design as well as for use in remodeling for Chemistry, Physics, Biology and General Science laboratories. Our representative engineer will be pleased to discuss your requirements and show you the entire line of Peterson furniture that has been the choice of leading educators and industrial furniture users for more than 65 years.

Write Dept. 1224 for Brochure Number 12 - It's FREE.

LEONARD PETERSON & CO., INC.
1222 FULLERTON AVENUE, CHICAGO 14, ILLINOIS

9 You can project for Audio-Visual Techniques with the Keystone

You meet every need of group instruction
with the versatile Keystone Overhead Projector:



STANDARD SLIDES. Have you seen the latest additions to Keystone's vast library of educational slides?



MICRO-PROJECTION; the entire class can see a microscopic subject.

STRIP FILM shown with the Keystone Overhead Projector's powerful illumination.



2-INCH SLIDES, and $2\frac{1}{4}$ -inch, clear daylight projection by 750 or 1,000 watt lamp.

TACHISTOSCOPE—indispensable for efficient teaching of reading and spelling. Reading rates increase 50% to 75% in a few weeks. No teaching procedure has ever had such unanimous approval from research and controlled experimentation (reports on request).

DISCIPLINE DURING PROJECTION—every teacher knows the problems of a darkened room; you use the Keystone Overhead Projector with normal lighting, facing your group.

Why have a projector that does less? You are invited to have a demonstration of the projector that does everything. Write KEYSTONE VIEW CO., Meadville, Pa. Since 1892—Producers of Superior Visual Aids.

KEYSTONE Overhead Projector



THE SCHOOL SCENE

(Concluded from page 8)

4. Local taxing districts continue to contribute the major portion of school revenues — 58.6 per cent, local; 39.7 per cent, state; and 3.5 per cent, federal.

5. There are now 45,393 school districts—down from 49,071 districts in 1957.

MORE "PALACES"

Dorothy Thompson, vociferous critic of "educationalists' palaces" to "play, eat, and have a good time," lashed out again in the January *Ladies Home Journal* against driver education courses, hot school lunches, ineffective spellers, high taxes, etc. She contrasted the austerity of English private (boarding) schools where life is so austere that home seems a paradise of comfort and luxury to the U. S. where the schools are easy and pleasant and home life "irksome."

COST RISE IN ILLINOIS

The state of Illinois faces a 10 per cent jump in school costs. The cost of operating the schools will increase an estimated 10 per cent, or \$285 million dollars, in the next biennium, according to the revenue committee of the School Problems Commission.

The Commission asserted that an increase in property taxes, which now provide 80 per cent of the state's school funds, is impracticable. It was suggested that the state assume a substantial part of the increase. A 10 million dollar state grant to local districts for building purposes was also recommended.

SCIENCE SUPERVISER

The Des Moines, Iowa, school board has created the position of supervisor of district courses in science and mathematics. Superintendent Harris said he believed special attention should be given this program, which calls for constant attention.

STUDY TEACHING

A one-year survey of teaching practices that distinguish outstanding schools from average schools has been begun by Teachers College, Columbia University, New York, N. Y. The survey will be conducted in about 475 schools in 70 school systems of the metropolitan area, including eight New York City areas.

The survey will be carried on by 250 teachers and school administrators who will comprise "search teams." The teams will go into classrooms to look for new curriculum developments, at the way teaching is done, and at how the schools are meeting new demands in education.

DRESS OF HIGH SCHOOL BOYS

The school board of Munising, Mich., has adopted new rules regulating the dress and manner of dress of high school boys. T shirts are not permitted to be worn as both an outer and an undershirt. Sport shirts when worn must be fully buttoned, except with the exception of the top or collar button. All types of outer shirt must be fully buttoned. Pants when worn must reasonably fit the boy. Extremely tight pants and hip pants are not permitted. Belts must be worn with all pants.

Mental Health Campaign



Give!

A bandwagon worth jumping on!

Just look at the reasons school bus buyers have for boarding the Dodge bandwagon: Choice of powerful V-8 or dependable Six engines . . . capacities from 30 to 66 pupils. New hydraulically actuated clutch, and suspended brake and clutch pedals for easy operation and added driver comfort. And, of course, Dodge dependability that never leaves students stranded.

Everything about the extra-rugged Dodge school bus chassis sounds a *safety* note, too. Exclusive driver-adjustable parking brake, for instance. And rear-shackled front springs for better driver control under all road conditions. Powerful brakes. Standard dual headlamps—the list could go on and on. Ask your Dodge dealer about *all* the reasons why . . .

today,
it's real smart
to choose **Dodge**
SCHOOL BUSES



An automatic transmission that's a boon to your part-time school bus drivers—regular drivers love this optional Dodge Torqmatic, too. Built-in hydraulic retarder gives extra safety and doubles brake lining life! No shifting, no clutching. Saves gas—in fact pays for itself in short order.

NEW BOOKS

56 Practices for the Gifted in Secondary Schools

Prepared by George K. Stone, Audna T. Clum, and Edward R. Van Kleek. Paper, 129 pp. University of the State of New York, State Education Dept., Albany, N. Y.

This bulletin offers a variety of concrete ideas and experiences that will stimulate members of the school staff in re-evaluating practices

for the gifted and talented and improve the quality of their programs. The booklet points out provisions for the gifted in the curriculum, lists the general practices, and the subjects to be taught.

Pupil Promotion Policies and Rates of Promotion

Paper, 55 pp., \$1.50. Circular No. 5, 1958. Research Division, National Education Association, Washington 6, D. C.

The study which included 532 school systems of all sizes, indicates that less than four per cent of the districts promote pupils semi-

annually. Annual promotions were reported by 86.5 per cent of the districts. An additional 3.0 per cent is in the process of changing to annual promotions. Only nine systems were identified as ungraded primary plans operating in all elementary schools. The promotion rates reported in primary grades showed no definite pattern, although a number of districts retain more pupils in grade one than in the two higher grades.

Also Received

High Spots in State School Legislation, January 1 to August 1, 1958

Prepared under the direction of Sam M. Lambert and Hazel Davis. Paper, 28 pp., 25 cents. Research Division, National Education Association, Washington 6, D. C.

This report includes legislation reported by 18 of the 28 states during the first six months of 1958. A total of 12 states report major achievements during the six-month period.

Illustrative Projections of the Population, by Age and Sex, 1960-80

Prepared by Meyer Zitter and Jacob S. Siegel. Paper, 25 pp., 25 cents. U. S. Bureau of the Census, Washington 25, D. C.

This report presents four series of projections of the population of the United States, by age and sex. The report indicates that the growth of the population of elementary and high school age will continue. The age group 5 to 13 years will continue to grow during the next several years, as children born between 1953 and 1957 enter this group. By 1962, when children born in 1957 reach age 5, the group will number 34½ million, or about 4½ million more than in July, 1957. Persons of high school age (14 to 17 years) will number about 14.3 million by 1965, and about 15.9 million by 1970. The population 18 to 24 years of age, which includes the college age group, will be made up of 25 million persons by 1970, or 10 million more than in 1957. The college age group (18 to 21) will number 14.6 million by 1970, and 16.3 million by 1975. This represents twice as many college-age persons in 1975 as in 1957.

Space, Arrangement, Beauty in School

Prepared under the direction of Hazel F. Gabbard. Paper, 51 pp. Association for Childhood Education International, Washington 5, D. C.

In planning new schools or reconditioning old buildings, major consideration must be given to space, arrangement, and beauty. Each of these factors helps to make the school environment good for children.

The present booklet offers help in the construction of new school facilities, making it possible for teachers and children to experience the physical joys of space, light, and color. It calls attention to the help of movable furniture, classrooms with exits to grassy plots for extending the work and play areas, sinks with water fountains, cupboards, bulletin boards, and storage closets. Suggestions are given for overcoming crowding and space problems.

A Longer School Year

By A. F. Harbo. Mimeographed, 17 pp. State Department of Education, St. Paul, Minn.

This research study is an objective presentation of the pros and cons of the proposal that the schools be open throughout the year. It makes clear the advantages and disadvantages of (1) the four-quarter plan which theoretically offers many advantages but practically is extremely difficult to carry into effect; (2) the 9 or 9½-month school year followed by a summer enrichment and remedial program; (3) the 12-month school year; (4) a 210-day school year which is equivalent to a 10½-months program; (5) data on the school year in other countries.

The research makes evident that very much study and experimentation is necessary before the school year can be extended over the present 180-day plan.

In-Service Training of Science Teachers

Prepared by Alfred D. Beck, Louis Teichman, and Maurice Basseeches. Paper, 68 pp. New York City Board of Education, 110 Livingston St., Brooklyn 1, N. Y.

This is a report of the work carried on in the junior high schools to train teachers of science who, while otherwise competent, do not have the necessary license

(Concluded on page 64)

for the planner's shelf

Saving Dollars in Building Schools

By David A. Pierce. Cloth, 112 pp., \$5.95. Reinhold Publishing Co., New York 22, N. Y.

This book, which was originally prepared for the use of school boards and school administrators of the state of Ohio, represents a new level of architectural writing on the basic problems of school building planning and construction. While the point of view is that of economy, the author includes in his concept both educational economy and efficiency and ultimate building economy. He does not demand low first cost as a requisite, but includes the cost of maintenance and depreciation for replacement as essential elements.

The book takes up in sequence: (1) the problems of planning school buildings for effective educational use and for economy in construction, plus maintenance and replacement; (2) the problems of financing school buildings, and consideration of the ability of the local school district to meet its needs with available and obtainable funds. (3) Chapter IV discusses the use of the commonly accepted construction materials and methods and evaluates these on the basis of first cost, utility, and ultimate cost. There is an exceptionally fine section in this chapter illustrating in detail the types of wall, ceiling, and roof construction, with details of initial and ultimate cost during a period of 30 years. (4) Chapter V describes heating and ventilating systems, illumination plans, and plumbing and sanitation installations. The author makes clear that daylight cannot be depended upon solely for uniform and educationally satisfactory lighting of school areas.

A final chapter suggests a method of analyzing various school building plans from the standpoint of initial cost and ultimate cost. A bibliography and an index complete the work. The book appeals to us as the best of the recent additions to the growing literature of school architecture.

Potential Economies in School Building Construction

Prepared by the School of Architecture of the Rensselaer Polytechnic Institute. Mimeographed, 83 pp. Published by the State Education Department, Albany, N. Y.

This research study embraces a detailed analysis of building design, building planning, and procedures of school building programs. It recognizes the basic educational needs which must be supplied in school building, but it takes a completely independent point of view on the construction of school buildings, and outlines basic economy measures which should be consistently used by professional people, boards of education, and architects, responsible for new school building plans and construction. It makes clear that ultimate economy

does not mean cheap materials or poor planning of classrooms and other facilities. It shows, however, that there are some rather deep-seated elements of possible waste, as well as economy and utility for instructional and all-over educational use, in plans. There is need for studying plans to provide the maximum of educational areas as related to non-instructional and constructional areas. This study deserves wide use by school authorities and their architects. It is specific in its recommendations and in many respects distinctly different from similar publications issued by educational groups.

School Sites: Selection, Development, and Utilization

By James L. Taylor of the U. S. Office of Education. Paper, 91 pp., 75 cents. Superintendent of Documents, Government Printing Office, Washington 25, D. C.

This publication is planned to provide basic information on present desirable practices in the selection, layout, and operation of school-plant sites as essential and effective elements in the instructional services and the over-all educational programs of elementary and secondary schools. Section I provides an overview of the school-site problem; Section II takes up the specific details of planning sites for the regular and extracurricular instructional services; section IV discusses administrative procedures and criteria; section V takes up the problems of traffic and major use development; section VI presents ideas currently advocated for the better layout and use of sites. The document sets high standards for the size and development of school sites; these are valuable, especially if interpreted in terms of local school programs and community recreation plans.

Areas in School Buildings

Paper, 8 pp. Published by the American Standards Association, 70 East 45th St., New York 17, N. Y.

The complete title of this bulletin, which provides the first definitive method for measuring school buildings, is "The American Standard Methods of Determining Areas in School Buildings" (ASA065.2-1958). The immediate sponsors are the U. S. Office of Education and the National Association of Building Owners and Managers.

The document includes basic definitions and methods for arriving at the measurement of gross areas of elementary and secondary school buildings. It is notable that the educational team responsible for the document was headed by the veteran Dr. N. E. Viles of the U. S. Office of Education, and included six additional school and college men responsible for school plant administration.



How to give a beginner professional poise *(in one swift lesson)*

There's no doubt about it, the new Royal Electric is fast becoming the favorite for teaching beginners.

Why? You name it. Less time spent on key stroking and carriage drills. The famous Magic® Margin that

makes margin setting *automatic*. And uniform scales for easier "positioning" of work on paper.

Royal has thought of *everything* to make teaching and learning easier.

Best For Advanced Students!

Thank goodness! There's less trouble changing from manual to electric models. Royal alone offers you the invaluable Touch Control® feature that lets students transfer easily and *naturally* to electric typing.

And, of course, all controls are in the usual familiar positions — including tabular and back-spacing keys.

New Royal Electrics are built to be reliable. Service interruptions hardly

ever happen. (Still, any time you *do* need service, it's nice to know Royal has more service facilities than any manufacturer.)

How about a demonstration today? You're the best judge—and your nearby Royal man would be delighted to oblige you, at *your* convenience. Call him now. He can help *you* and your students do a better job faster.

ROYAL® electric

Product of Royal McBee Corporation,
World's Largest Manufacturer of Typewriters.

THERE ARE MORE ROYAL TYPEWRITERS IN SCHOOL AND OFFICE USE THAN ANY OTHER MAKE.

NEW BOOKS

(Concluded from page 62)

to teach the subject in the New York City schools. The work included typical science demonstrations, and provided careful outlines of work in 57 areas of science teaching. Particular attention was given to safety, dietetics, and electronics.

Financing Your College Education

Prepared by George J. Allen and Mrs. Florence Purcell. Paper, 26 pp. Published by Sewanhaka Central High School Dist. No. 2, Nassau County, N. Y.

This pamphlet is devoted to (1) scholarships provided by local colleges, (2) scholarships awarded by private organizations, (3) opportunities in the New York State University, (4) federally sponsored military academies, (5) privately sponsored tuition-free schools, and (6) municipal colleges.

Preparation and Performance of Teachers

By Lloyd S. Standee and W. James Popham. Paper, 48 pp., \$1. Division of Research and Field Services, Indiana University, Bloomington, Ind.

The present study was undertaken to determine whether there is a relation between (1) teacher preparation and size and type of graduating institution; (2) teacher performance and size and type of institution; and (3) teacher preparation and teacher performance. The subjects for the study comprised 880 teachers representing 1954 degree graduates of 24 Indiana colleges and universities. It was concluded that graduates from different sizes and types of teacher-education institutions do differ in their preparation for teaching and in professional performance. They also differ in certain background dimensions prior to entering the institutions from which they were graduated. There is nothing to warrant the conclusion that any one size or type of institution is producing better teachers.

Who Runs Our Schools?

By Neal Gross. Cloth, 195 pp. John Wiley & Sons, New York, N. Y.

This book presents the author's research findings about 105 Massachusetts superintendents of schools and 580 school committee members in the same state — summarizing their feelings about their jobs. Most of the information was obtained by direct interviews, and it is the author's conviction that the random sampling which includes more than one half of the town and city superintendents, and a considerable number of committee members, provides a true picture of the administrative problems and failures, as well as the successes, of Massachusetts public schools.

The beginning chapters discuss the types of pressures and the groups who hold back the superintendents and the schools, as well as those who support the schools. An informative chapter is devoted to reasons why most school board members desire to hold this nonremunerative office. In a big majority of the cases the motivation is good, but in a significant number of cases, reasons other than the welfare of the children are at work. The author is convinced that, generally speaking, the superintendents do a good job, but he is not so certain that the committee members do equally good jobs.

The study devotes some attention to the problems which are cause for agreement and disagreements, and recommends in detail what the author believes should be done to improve the situation. He believes that the most difficult problem is the lack of adequate financial support and in a secondary way definite school objectives which have never gone beyond the ancient general purpose of public welfare.

A study of this kind reveals some of the uneasy attitudes of professional schoolmen concerning the political, economic, social, racial, and religious influences which altogether impinge on the local school systems and which must be met by the chief executive and the school committee. Democratic controls such as school boards provide in the operation of schools are a distinct part of this uneasiness of superintendents. School boards are not without fault, but they do represent the only feasible representative form of local school government possible in our states. By and large they are one of the outstanding successes of our democracy.

Nonautomatic Provisions in Teachers' Salary Schedules

By Theodore Vienstok. Paper, 12 pp. State Education Department, Albany, N. Y.

This study provides an insight into the practices of 150 school districts which have some form of supplementing the pay of able, efficient teachers and of 36 school districts which have discontinued recognizing superior performance of teachers. The report outlines five degrees of intensity of commitment to the merit principle, ranging from clear-cut criteria of merit and a formal procedure of evaluation to a vague safeguard permitting discretion in granting higher pay. The study outlines five devices used in rewarding merit: (1) a higher top pay (the most popular plan); (2) accelerated annual increases; (3) a combination of acceleration and higher top pay; (4) bonus payments; (5) a special salary track for meritorious teachers. The lowest pay differential is as low as \$100; the majority of districts paid \$1,500 above the normal maximum; the highest differential was \$2,300.

The report concludes that only a limited number of school districts have a firm commitment to the merit principle. The phrasing of some merit clauses and the manner of their implementation suggest other factors such as "scarcity of personnel, unusual teaching load, and additional assignments beyond the classroom may be involved." It appears that the nature of a merit scheme depends more on the real intentions of the board and the way they are applied in practice than on the merit label attached to the plan.

Fire Insurance Principles and Practices in School Districts

By Paul B. Salmon. Paper, 88 pp., \$2. Bulletin No. 18, 1958. Published by Association of School Business Officials, Evanston, Ill.

A special insurance report, sponsored by the ASBO insurance management committee. The report urges broader insurance coverage, the adoption of the practice of awarding insurance to agents and companies on the basis of competitive bids, and the establishment of a higher loss-premium ratio for public school property. The recommendations call for the employment of a commercial appraisal firm for developing an itemized appraisal of all district-owned buildings, the selection of well-known insurance companies, the selection of the blanket type of insurance policy, and the use of the 90 per cent coinsurance clause.



The NEW WAY to TEACH 5 Classes in 1 Room!



Suitable Combinations for All Classrooms from These MODULAR UNITS

Functional styled Cramer Professional-school desks are adaptable to any classroom space. You can seat more students comfortably, efficiently . . . with greater work area, at lower cost.

Plus—Cramer Student Posture Chair encourages correct posture habits... lessens fatigue. 3-way adjustment for seat height, back height, seat depth. Formed natural plywood seat.



Write for catalog and name of nearest dealer

Cramer POSTURE CHAIR CO.

625 Adams, Dept. AS-1
Kansas City, Kansas

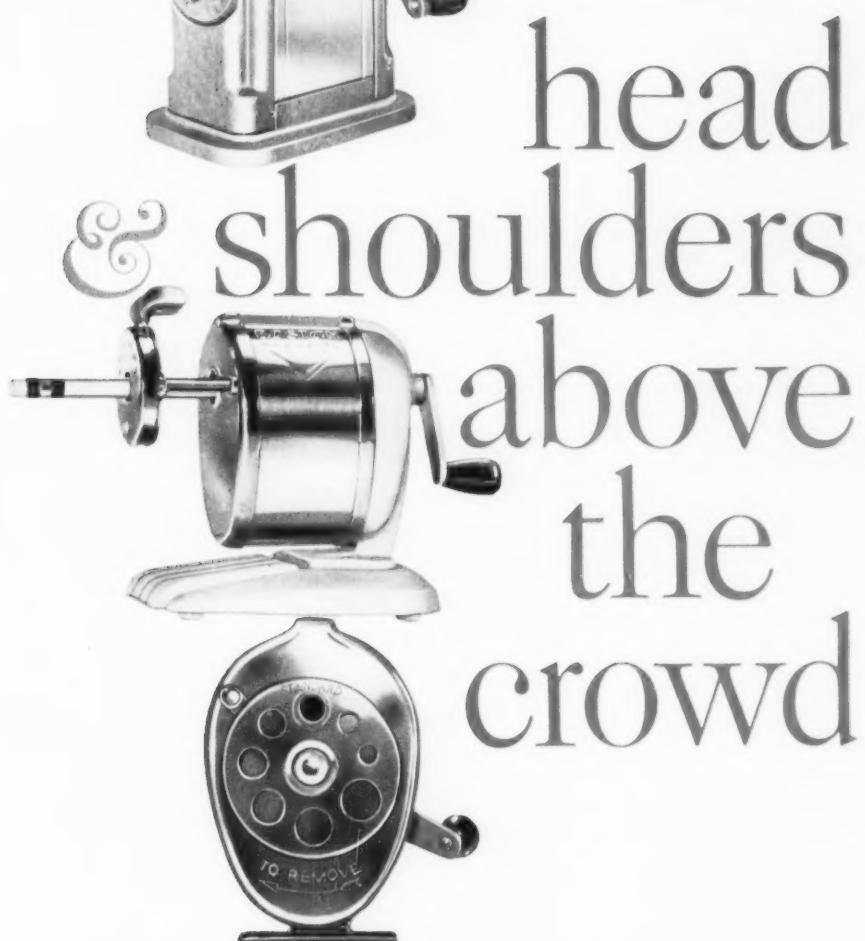
Cramer
Professional
"BUSINESS PRACTICE" FURNITURE



For years the leader where crowded school conditions demand maximum service and long life. There's a Boston K-S or Ranger model for wall, window or table mounting . . . or the portable Champion for schools with steel interiors. All models are all metal . . . hardened steel gears . . . 25% more cutting edges.

steel gears put

BOSTON®
PENCIL SHARPENERS



C. HOWARD HUNT PEN COMPANY, CAMDEN 1, NEW JERSEY



Let us send you this NEW DELTA CATALOG

... It puts the world's most complete line of power tools for school shops at your finger tips—offers a single source for 53 machines, 246 models, over 1300 accessories. You can choose the right tool to teach every woodworking and metalworking operation—and students learn on the tools they'll use in industry.

DELTA TOOLS ARE SAFE

DELTA TOOLS ARE PRACTICAL

DELTA TOOLS ARE ECONOMICAL

That's why: 72% of U.S. schools teaching shop teach with Delta Power Tools.

Send For Your FREE Catalog Today Complete descriptions and specifications on every Delta tool and accessory. See the complete line at your nearest Delta Dealer and ask him about Delta's unequalled teaching aids for shop instructors . . . he's listed under "TOOLS" in the Yellow Pages.

Rockwell Manufacturing Co., Delta Power Tool Division,
408B N. Lexington Ave., Pittsburgh 8, Pa.

DELTA POWER TOOLS

another fine product by

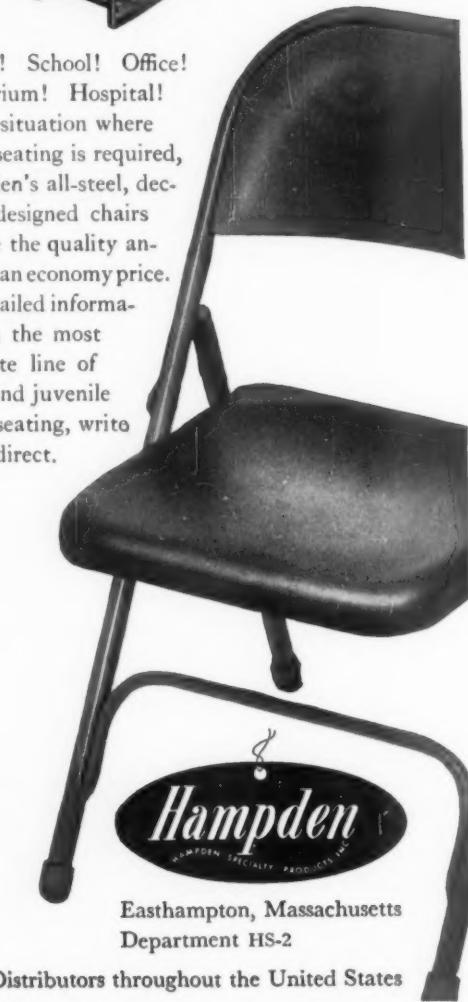
ROCKWELL



**NEW DIMENSIONS
IN PUBLIC SEATING**



Church! School! Office!
Auditorium! Hospital!
In any situation where
public seating is required,
Hampden's all-steel, dec-
orator-designed chairs
provide the quality an-
swer at an economy price.
For detailed informa-
tion on the most
complete line of
adult and juvenile
public seating, write
today direct.



Hampden

HAMPDEN SPECIALTY PRODUCTS INC.

Easthampton, Massachusetts
Department HS-2

Distributors throughout the United States

Abuse of School Board's Discretionary Authority

STEPHEN F. ROACH

Editor, *Eastern School Law Review*, Jersey City, N. J.

The powers usually assigned to local school boards by statutory (or Constitutional) provisions may be thought of as being either *ministerial* or *discretionary*.

Ministerial-type powers are those which neither permit nor require the exercise of subjective judgment by the board. A local board responsibility "to present to each voter at the election (for the members of

the board) the annual report and the budget for the ensuing year in printed form," for example, would be in this category.

On the other hand, when the considered judgment of a board is involved in determining the manner or degree in which one of its powers or responsibilities is to be exercised, such authority may be termed

"discretionary." A grant of authority to a board permitting it to adopt "all reasonable rules and regulations necessary for the efficient operation of the schools" would be illustrative of this type of power.

In most states the major portion of a local board's authority is probably discretionary in character. This must, of necessity, be so because of the great variance in educational needs within the school districts of even a single state; and because of the resulting diversity of powers and responsibilities, in both nature and degree, which must be exercised to meet these needs.

Role of the Courts

In connection with the exercise of such discretionary authority, the courts have generally ruled that a board is to be limited only by the requirements and restrictions imposed by law.

Accordingly, as a general rule, the courts do not interfere with a board's exercise of discretionary authority, even though the board's judgment, as adopted, may appear unwise. Court restrictions have thus come to be limited almost exclusively to those instances where the board action was adjudged *unreasonable* — rather than unwise — or where the action was in *violation of existing law*, or where it was a *clear abuse* of the board's discretionary authority.

A discussion of three recent decisions in this area of school board operations should be of value since the pertinent court opinions may be indicative of significant trends of which board members should be aware.

**HOLDEN
PATENT
BOOK
COVER
COMPANY**

**Manufacturers
and
Distributors
of**

HOLDEN BOOK COVERS — recognized as the Standard of Quality for over eighty years.

HOLDEN PORTFOLIOS — made of the same quality paper as the Book Covers, and especially designed to meet the needs of students in art and music departments.

HOLDEN REPORT CARD ENVELOPES — thumb-cut and made of the same material.

KOMET — a liquid plastic preparation which provides a quick and permanent method of repairing books. It will repair torn pages, loose pages, loose bindings, and will bind a number of sheets together.

Samples on request

HOLDEN PATENT BOOK COVER COMPANY
SPRINGFIELD 1, MASSACHUSETTS

It may be of more than passing interest that in each case a change in school district boundaries was involved.

Illinois Case

In the first case,¹ a petition signed by two thirds of the legal voters concerned sought annexation of certain territory in other school districts to the Coulterville School District. The Randolph County Board ordered the requested annexation.

Applicable Illinois statutes provided that the county board was to "determine

Oakdale Community Consolidated School Dist. No. 1 et al v. County Bd. of School Trustees of Randolph County et al. In Supreme Court (1957). Cited as 12 Ill. 2d 190; or 145 N.E.2d 736 in the West National Reporter System.

whether it is to the best interests of the schools . . . and the educational welfare of the pupils that such changes in boundaries be granted."

Two of the districts from which territory was to be detached by the county board's annexation order brought suit, contending that the county board decision was not supported by the evidence. In turn, the county board contended that the petition—and the board's action on it—expressed the wishes and desires of the inhabitants of the territory detached. Court testimony showed that some of the voters who had signed the petition desired the boundary change because Coulterville was their trading and banking center.

The court record also showed that inso-

far as either the Coulterville or the two protesting districts were concerned, no substantial differences would be involved in educational facilities, in curricula, or in distances to be traveled by pupils. The evidence also disclosed that: (1) the number of pupils per teacher was "already greater at Coulterville"—i.e., before the proposed boundary change—"than at either of the [protesting] districts"; and (2) the change would deprive the two protesting districts of 20 per cent and 10 per cent of their respective assessed valuations.

Thereupon the Illinois Supreme Court concluded: "An examination of the facts in the record . . . shows [that as a result of the county board's decision to allow the petitioned boundary changes] . . . there will be a serious depletion in the tax resources . . . and an overcrowded condition in the . . . schools [of the protesting districts]. The result is a detriment, rather than an improvement in the educational picture of the entire area. The record is insufficient, therefore, to support the decision of the board."

Arizona Case

In the case² decided by the Supreme Court of Arizona petitions had been submitted to the appropriate County Superintendent requesting changes in the boundaries of a Union District by detaching some sections of it. The petitioners were electors of the neighboring district to which the proposed sections of the Union District would be annexed. As their reason for the annexation, the petitioners had given: "choice and convenience."

The County Superintendent, citing the inadequacy of the "educational facilities" and "methods of instruction" in the Union District, recommended that the County Board approve of the proposed changes. The County Board then ordered the annexation, to which order the trustees of the Union District were now protesting.

The evidence showed: (1) that the transportation facilities then existing in the Union district were neither "inadequate" nor "inconvenient"; and (2) that if the proposed changes went through, nine children would be transferred from the Union District while some forty-odd would remain.

However the evidence also showed that the proposed changes in boundary would delete from the Union District approximately two thirds of its assessed valuation and would cause the district tax rate to go from \$2.27 to \$5.27.

In this connection the Court then said: "[We] are unable to discover any reasonable basis for the board's action in deleting from Union approximately two-thirds of its taxable area and nearly two-thirds of its assessed valuation. . . . This disastrous effect on Union was accomplished to satisfy the choice of nine children with an excess of 40 children left to be educated somehow after the district had been stripped."

The court then continued: "If the facilities of Union are inadequate as the county

¹Dick et al. v. Cahoon et al. In Supreme Court (1958). Cited as 84 Ariz. 190; or 325 P.2d 835 in the West National Reporter System.

(Concluded on page 71)

You Owe It To Your School—

STRONG SPOTLIGHTS FILL A SCHOOL'S NEEDS BEST!

Have a—

SPARKLING BRIGHT LIGHT!

for your next show or concert in your auditorium, your dance in the gym, or special event in your stadium.

To reduce spot size, ordinary spotlights must mask out or iris down part of the light beam, thus wasting much of the light. Furthermore, the resultant spot is usually fuzzy-edged and irregularly shaped.

With the exclusive, single-control, two-element variable focal length objective lens system of Strong Spotlights, the brilliance of the spot actually increases as it is reduced in size, is sharp edged from head to flood, and continues perfectly round throughout the range.

See your theatre, school or stage equipment dealer for a demonstration or send coupon for brochures. Wire Collect for Name of Dealer.

THE STRONG ELECTRIC CORPORATION
46 CITY PARK AVENUE TOLEDO 1, OHIO
Please send brochure on Strong Spotlights and names of nearest dealers.

NAME _____
SCHOOL _____
STREET _____
CITY & STATE _____

A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

GPE CORPORATION

AND FINEST
THE LATEST V
OUT



SEE QUADRALINE AT THE A.A.S.A. CONVENTION . . . BOOTH 1247-49-51-53!



QUADRALINE  BY AMERICAN DESK
MANUFACTURING CO. TEMPLE, TEXAS

**trim
neat
lines**



QUADRILINE
by american desk

**rugged
square
tubing**



Series 900 Combo

Coming your way! A complete new line of school furniture in keeping with today's teaching methods and objectives. Shown, the Combo desk and chair designed as an integral unit . . . controls aisle traffic, groups front to front for two-student working areas, provides liberal and comfortable working facility.

See Quadriline on display in Booths 1247-1249-1251-1253!



Series 1300 Jr Exec and 500 Chair



Series 1410 Instructor's Desk with Series 800 Chair



See • Learn • Compare
at the AASA Exhibit
Atlantic City, Feb. 14-18



American Desk Manufacturing Co.

Temple, Texas

SCHOOL LAW

(Concluded from page 68)

superintendent contends, a reasonable and just solution for the benefit of all cannot possibly be to provide adequate facilities for a few to the detriment of many." Such action by the board, the court concluded, was "not a reasonable solution."

Missouri Case

The third case³ involved a petition requesting that a proposed change in the boundary of a reorganized school district be submitted to the voters. The school board of the reorganized district, to whom the petition had been submitted, declared it to be insufficient in that, among other things, it was not signed by the required number of qualified voters. This action of the board was based on its finding that the name "Mr. Sampson Lunsford" and the name "Mrs. Frances Lunsford" had been signed by the same person.

It had been established at a lower court hearing that because Mr. Lunsford did not have his glasses at the time the petition was presented to him, he had directed his wife to sign his name, and that she had done so in his presence.

The present court noted that the basic question here involved the signature "Sampson Lunsford" on the petition, since if it could be shown that his name had been validly affixed thereto, the petition would then be in full accord with the ap-

plicable statutes.

But even assuming (as the court did) that the board did not know all the facts as to the affixing of Mr. Lunsford's signature either at the time the petition was presented to it or at the time the board determined it to be "insufficient" the court nevertheless found that the "question presented [to the board] . . . was a simple one, namely—was Mr. Lunsford's name written either by him or with his actual authority?"

Noting that Mr. Lunsford was admittedly qualified to sign the petition, and that it was not necessary in this instance "that the voter . . . affix his signature himself," the court said: "A most simple and casual inquiry would have brought forth the answer; [particularly since] at least one member of the board knew the Lunsfords."

Therewith the Missouri Supreme Court held "that in acting without any inquiry whatever, even the slightest, and in thus finding that the signature was wholly void (and, in practical effect, a forgery) the Board abused its discretion and acted arbitrarily. Either some inquiry should have been made promptly or the Board, on informal and prompt notice, should have given Mr. and Mrs. Lunsford an opportunity to be heard on the subject." Nor could it be said that in its determination the board had "merely erred in a matter of law." Rather, the court emphasized, the board had made no "investigation of the facts" and without such investigation no determination "could intelligently be made."

Summary

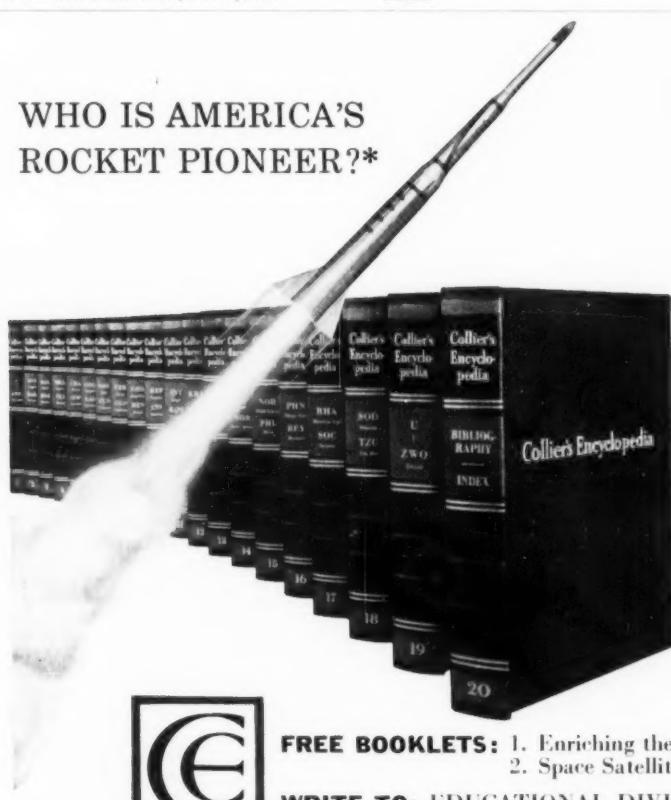
In summary it will be recognized that, in each of these instances, the school board was adjudged to have abused its discretionary authority: in the Arizona and Illinois cases, because the decisions, as made by the boards, were not supported by the record or by the weight of evidence, or were in disregard of the best interests of the affected districts as a whole; and in the Missouri case, because the board had made its decision without an adequate investigation.

In the Illinois case, it will be recalled, the board's decision—while it was in conformance with the preferences of the petitioners—would increase the pupil-teacher ratio in the reorganized district, as well as decrease the assessed evaluation (by 10 and 20 per cent) in the districts from which territory would be detached. In the Arizona case, the board decision—which again was in conformance with the choice and convenience of the petitioners—would increase (by 132 per cent) the tax rate in the district from which the territory would be detached, but would not correct the admitted inadequacies already existing in that district.

The cases here discussed have significance for school board members for two reasons. First, because they illustrate current judicial views concerning the proper processing of boundary-change petitions by local boards; and second, because they delineate, at least in part, the characteristics of acceptable board actions insofar as those actions relate to a board's discretionary authority. ■

³State of Missouri ex rel. Kugler et al. v. Tillastor et al. In Supreme Court (1958). Cited as 312 S.W.2d 753 in the West National Reporter System.

WHO IS AMERICA'S ROCKET PIONEER?*



FREE BOOKLETS: 1. Enriching the General Science Curriculum
2. Space Satellites 3. Rockets and Satellites

WRITE TO: EDUCATIONAL DIVISION
COLLIER'S ENCYCLOPEDIA, 640 Fifth Avenue, New York 19, N. Y.

COLLIER'S ENCYCLOPEDIA

This question starts the student on a new adventure in learning. Collier's Encyclopedia has the answer and much more to attract the student to related subjects like Rocket Propulsion, Space Satellites, Guided Missiles, and lead him to such basic sciences as Astrophysics and Astronomy.

Collier's Encyclopedia is a 20-volume, profusely illustrated, major reference source. Its 50,000 articles are modern in concept, scholarly in approach, and are kept up-to-date through a program of continuous revision.

Teachers and students will welcome the combined authoritativeness, clarity and readability which characterizes the articles in Collier's Encyclopedia.

More Librarians are now consulting Collier's Encyclopedia first.

Collier's Encyclopedia is recommended by every Educational and Library Agency that evaluates encyclopedias.

*Goddard, Robert Hutchings;
See Collier's Encyclopedia Vol. 9, Page 143 F

CENTRALIZE your food preparation and SAVE MONEY

with--



Vacuum Insulated Carrier-Dispensers

- Unequaled Durability
- Permanent Efficiency
- Highest Sanitation

All Stainless Steel



Eliminate The Unnecessary Duplication Of Costly Kitchen Equipment By Adopting The "AerVoid-Central Kitchen System"

Serve any number of locations, any distances, even hours later — Piping Hot or refreshingly Cold with VACUUM Insulated AerVoids — the only permanently effective insulation. It does not settle, shrink or deteriorate — Nor does it permit dangerously insanitary leakage — Specify "AerVoid" To Be Sure — There Are None Equal.

- Highest In Quality
- Lowest In Cost

Write for FREE Literature Kit AS-21

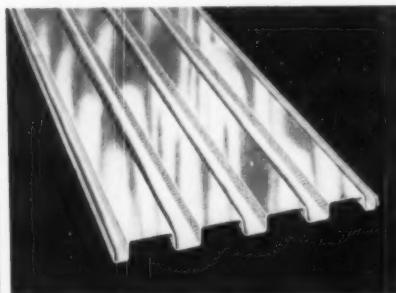


Vacuum Can Co.
19 S. HOYNE AVE. CHICAGO 12, ILL

News of Products for the Schools

SOUNDPROOF ROOF DECK

Milcor Acoustideck is a combination steel roof deck and acoustical ceiling made by Inland Steel Products Co., Milwaukee 1, Wis. The deck can absorb 70 per cent of sound reaching it, making it particularly suitable for use in schools, including gymnasium, cafeteria, music rooms, and shops. The vertical steel



Insulation Included

webs are perforated and inert fiber batts are inserted on the job to achieve the sound-proofing. Acoustideck is available in 18-, 20-, and 22-gauge steel, either Bonderized and prime coated, or galvanized, as well as in 14 and 16 gauge galvanized steel. The pre-cut panels, with insulation, weigh only five or six pounds per sq. ft., and thus permit deck spans up to 10 ft. for normal roof loads. It can be used with wide joist spacing and light supporting framework. Send for full details from the company.

(For Further Details Circle Index Code 01)

LANGUAGE LABORATORY BOOTHS

Flexilab, a newly designed listening booth for language laboratories, is manufactured by Language Training Aids, Boyds, Md. Each booth is lined with acoustic tile, has earphones, and a sliding back panel which can be lowered for group work. Flexilab booths are made in single, double, and triple units to be used in any arrangement desired by the teacher. The sturdily constructed booths are shipped knocked down, but according to the manufacturer, are easy to assemble and wire.

(For Further Details Circle Index Code 02)

WIRE STORAGE UNITS

Basket racks and wire baskets, available from Penco Metal Products Div., Alan Wood Steel Co., Oaks, Pa., provide ventilated storage for gym suits, shoes, lunches, and have many other uses. The baskets and racks can be securely locked together with a padlock. The baskets are available in two sizes: either 9 or 12 in. wide by 13 in. deep by 8 in. high. Constructed of wire mesh, they have matching number plates riveted to the basket and rack. The racks can be ordered with single- or double-face construction and can be used in a wide variety of arrangements. Single-face units are 13½ in. deep, double face racks are 27 in. deep. Swivel casters on racks are optional.

(For Further Details Circle Index Code 03)

STURDY CLASSROOM DESK

The new classroom desks by Irwin Seating Co., Grand Rapids, Mich., feature a new



All-in-One Unit Desk

Monosteel top, which combines a rigid steel base with a wood-core texolite surface. One-piece steel frame prevents the top from rattling, bending, or twisting, while the texolite surface will not warp, split, or check. The top is edged with an anodized aluminum band, placed flush with the writing surface. The Monosteel top measures almost 19 by 24½ inches, and is available in either a birch or sage finish. A roomy book box is screwed permanently to the steel frame.

(For Further Details Circle Index Code 04)

LOW COST DUPLICATOR

Ditto, Inc., Chicago 45, Ill., has added a new 14-inch model to its D-70 line of office duplicators. The machine takes paper in sizes of from 3 by 5 inches to 14 by 14 inches, and will handle a ream of paper from 16 lb.



Handles All Paper Sizes

to card stock. Models in the D-70 series are longer, lower, and wider than the firm's previous models and are available in a combination of gray and green. Two features of the machine are its push-button paper feed and adjustable feeding and receiving trays. The D-70 uses a system of 20 fluid jets, which confines ink distribution to the needed area. A visual liquid level shows how full the tank is at a glance, eliminating a dip stick.

(For Further Details Circle Index Code 05)

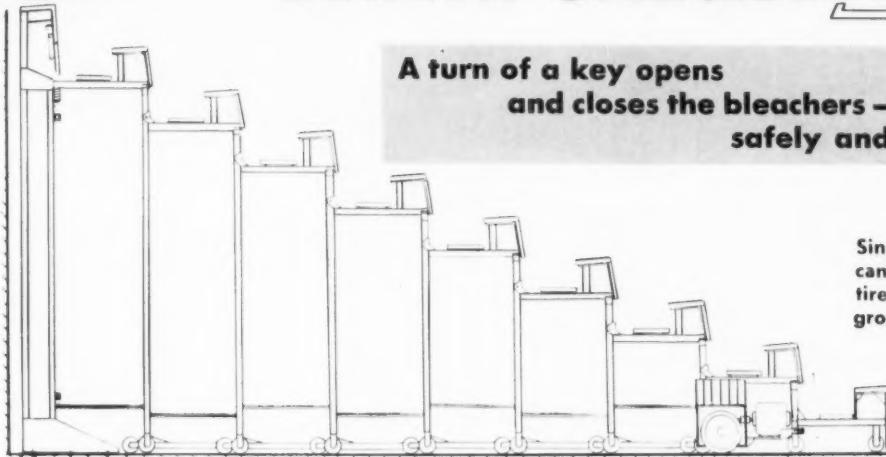
(Continued on page 74)

**CORRESPONDING CODE INDEX NUMBERS TO
BE ENCIRCLED CAN BE FOUND ON THE CARDS
IN THE READER'S SERVICE SECTION**

Announcing

the ultimate in mechanical folding bleacher operation

BERLIN OMEGA EZ-A-WAY



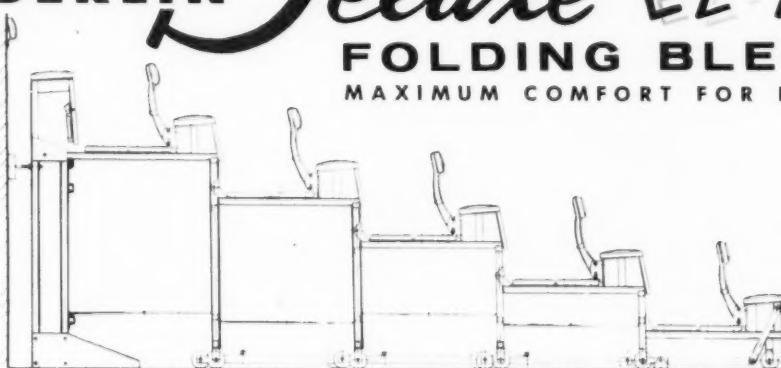
EXTENDED POSITION

Patent applied for

Single station control
can open or close en-
tire installation — or a
group of sections only.

You tell us the type of bleacher setup you want . . . we have it. OMEGA EZ-A-WAY may be used on all types of folding bleachers, including reverse fold delayed-action balcony installations. Easy and simple operation . . . no complicated installation . . . any school personnel can operate it. No damage to equipment as there is no chance of mis-handling equipment during opening and closing operations . . . NO ADJUSTMENTS NEEDED FOR LIFETIME OF INSTALLATION. Its versatility warrants your immediate investigation.

SEAT YOUR SPECTATORS IN OPERA STYLE BERLIN *Deluxe EZ-A-WAY* FOLDING BLEACHERS MAXIMUM COMFORT FOR PREMIUM SEATS



EXTENDED POSITION



CLOSED POSITION

**SELECT
COLORS**

to harmonize
with your
gymnasium
setup

Here are bleachers with
all the design features of
the regular EZ-A-WAY
plus Deluxe seats in color
to harmonize with your
gymnasium surroundings
... any color combination
... alternate seats in any
row may be different.

Deluxe EZ-A-WAY folding bleachers may be equipped with OMEGA power unit . . . Roll-o-Matic-mobile units hydraulic. Any operation may be used on Deluxe EZ-A-WAY — fixed — delayed action — all types of mobile units. If any damage is done to the seat, only one seat need be removed for repairing.

WRITE FOR COMPLETE DETAILS TO

BERLIN
SEATING
ENGINEERS

BERLIN, WISCONSIN

A Division of Consolidated Foundries
And Manufacturing Corp.

THAT NEW PRANG® DRAWING PENCIL BEATS ANYTHING I'VE EVER SEEN!



*try 'em!
-on us!*



Prang, long recognized in the education world adds a new series of art pencils to their line. They were developed with a thorough understanding of the requirements needed in teaching and art education.

Available in five selected grades, they give a complete range for all basic art activities.

These Prang pencils have been tested for their performance! Only those products that perform carry the name Prang!

Write for a free sample Prang Pencil Kit on letterhead. Dept. AJ-72.

a THE AMERICAN CRAYON COMPANY SANDUSKY, OHIO NEW YORK

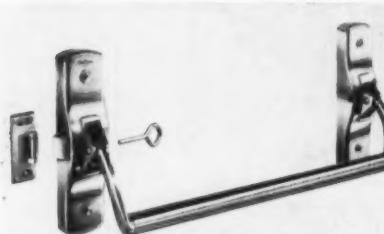
Only Prang makes
Prang Quality!

News of Products . . .

(Continued from page 72)

FIRE EXIT LOCKS

A new series of fire and panic exit locks have been developed by the Von Duprin Div.,



Panic Exit Device

Vonnegut Hardware Co., Indianapolis 9, Ind. Pictured is one of the new units, called Type 66. Three models are available in either stainless steel or all bronze, and in rim, mortise lock, and vertical rod models. Send for complete descriptive catalog No. 581.

(For Further Details Circle Index Code 06)

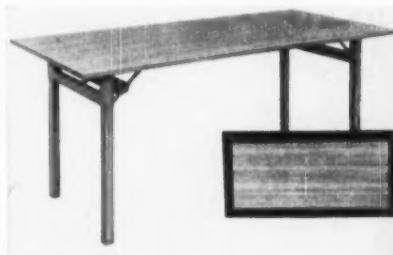
AUTOMATIC CHALK HOLDER

Teachers will appreciate the Hand-Genic automatic pencil holder for chalk. The holder eliminates chalk dust on hands and clothes, fingernail scratching on boards, and crumbling chalk. A touch of a button, at the top of the holder, ejects or retracts the chalk. Made by Hand-Genic Specialty Co., Miami 35, Fla., it will hold chalk as short as $\frac{1}{4}$ in., using up to 95 per cent of the chalk stick. The reasonably priced holder has a 22K gold plated cap and black onyx barrel. It is guaranteed for one year.

(For Further Details Circle Index Code 07)

BUDGET-PRICED TABLES

Budget-priced folding tables are available from Howe Folding Furniture, Inc., New York 16. Table tops are of HowLite, a vinyl plastic laminate bonded to solid plywood, with a



Plastic Tabletops

golden birch pattern. The plastic seals out food and beverage stains, wipes clean with a damp cloth, and absorbs the clatter of dishes and silverware. The tables come in six or eight foot lengths, and are 30 in. wide and 30 in. high, with an aluminum-edged top. They have square legs finished in beige baked enamel, and an all-steel chassis.

(For Further Details Circle Index Code 08)

(Continued on page 76)

CORRESPONDING CODE INDEX NUMBERS TO BE CIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

A Tragedy In Chicago...

was told in grim detail recently in newspaper headlines across America. 88 children and three adults lost their lives in a Chicago school fire. The news stunned the nation.

We at Gamewell are deeply concerned. Our sole business for over 100 years has been automatic fire detection and alarm systems. We know that science has provided equipment to prevent such tragedy.

Tragedy is a teacher. But often, after the headlines have faded, tragedy's greatest ally — *a man's own short memory* — lulls communities into complacency. Chicago's disaster gives mute testimony of the great danger of fire — and that hazards of fire are everyone's business.

If you are concerned with the safety of your children in your community's schools, have your Fire Chief, or School Board Official contact a Gamewell engineer. He is a highly trained expert in fire detection who can give you information, examples of fire alarm installations, and he will survey your buildings.

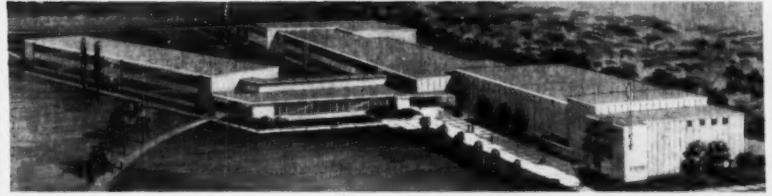
He is backed by the largest plant in the world engaged exclusively in the manufacture of fire and other emergency signalling systems and equipment. Have your official phone the nearest Gamewell office — we will gladly accept the charges.

HOME OFFICE: Newton Upper Falls, Massachusetts	Chicago, Illinois Phone: STate 2-8526
Phone: BiGelow 4-1240	Columbus, Ohio Phone: CApitol 8-4117
Bridgeport, Conn. Phone: EXpress 4-1170	Indianapolis, Indiana Phone: ATwater 3-2900
New York, N. Y. LEXington 2-6188	Detroit, Michigan UNiversity 3-4570
Boothwyn, Pa. Phone: GLobo 9-3789	Dallas, Texas Phone: RIverside 7-3403
Pittsburgh, Pa. Phone: LEhigh 1-0770	San Leandro, Calif. Phone: LOckhaven 9-5683
Charlotte, N. C. Phone: JACKson 3-5561	South Gate, Calif. Phone: LOrain 7-2269
Atlanta, Georgia Phone: CEdar 7-3588	Oswego, Oregon Phone: NEptune 6-3745
Fredericksburg, Va. Phone: ESsex 3-2103	Tallahassee, Florida Phone: 3-3794



THE GAMEWELL COMPANY

First When Seconds Count



Superintendent of Schools:
Dr. O. E. Hill

Assistant Superintendent:
Dr. R. Y. Leech

Architect:
Spann & Barnes,
Cleveland, Ohio

Electrical Engineer:
Mohrert & Reid,
Cleveland, Ohio

Electrical Contractor:
California Electric
Construction Co., Inc.
Parma, Ohio

*They wanted the best
modern time and
program system at the
\$2,225,000 Frank
Wiley Junior High
School in Cleveland
Heights, Ohio ...*



They chose Stromberg's new ***ELECTRONIC Time and Program System with...***

- Jeweled Master Clock movement with automatically wound 72-hour spring power reserve.
- Secondary Clocks standard with hourly and 12-hour supervision—correction cycles completed in *only 60 seconds*.
- Program Unit, capable of 1440 signals daily on each circuit, immediately resets following power interruption.
- Central operations panel for control of utilities.
- Seven-channel transmitter—one for clock supervision, six for program signals.
- Installation and maintenance service available throughout U.S.A. and Canada.

*A product of the laboratories of one of the largest
clock manufacturers in the world—YOUR GUARANTEE
of performance, quality and dependability.*



A complete catalog—TIME AND SIGNAL EQUIPMENT—prepared especially
for Architects and Engineers—is yours for the asking.

Stromberg
SUBSIDIARY OF GENERAL TIME CORPORATION



TIME CORPORATION

ELM STREET, THOMASTON, CONNECTICUT

Sales & Service Offices throughout the U. S. A.

News of Products . . .

(Continued from page 74)

PRINTS MICROFILM ENLARGEMENTS

Enlargements from microfilm can now be copied automatically in less than 10 seconds with the Thermo-Fax reader-printer, made by Minnesota Mining and Manufacturing Co., St. Paul 6, Minn. A new machine projects a



10-Second Operation

microfilm image onto a viewing screen and, at the touch of a button, prints a copy, 8½ by 11 in., in less than 10 seconds. The reader-printer operates anywhere on standard 110 volt a.c. The Thermo-Fax machine measures 25 by 17 by 19 inches and has a two-tone green finish. The inexpensive white copy paper comes in rolls of 250 prints, needs no special storage, and is impervious to normal office light.

(For Further Details Circle Index Code 09)

REMOTE CONTROL SLIDE PROJECTION

A remote controlled 35mm. slide projector has a built-in device to prevent slide popping. A temperature unit distributes warm air to cold slides, keeping them from popping out of focus when exposed to the sudden heat of the projector lamp. The unit is made by Graflex, Inc., Rochester, N. Y., a subsidiary of General Precision Equipment Corp. Known as the Constellation Mark II, it has a specially designed lamp, optical system, and cooling system. An Airequip Slide Changer and a special 15-foot cord allow the projector to be operated by remote control. The slide timer can be used for completely automatic operation at selected intervals of 5, 8, 12, 15, or 20 seconds. Slides can also be changed by manual or push button control. The projector uses a smaller focus lamp which is pressurized for longer life and increased brilliance. A precision 4-inch f/3.3 lens system projects the image on the screen with brilliance and clarity.

(For Further Details Circle Index Code 010)

BALANCED-KEY ELECTRIC CALCULATOR

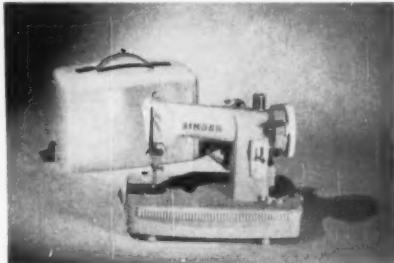
An electric adding machine with several new operating advantages has been announced by Remington Rand Div., Sperry Rand Corp., New York 10, N. Y. Model 93 has a balanced feature-key placement which allows rapid calculation and permits the operator to realize immediately when a mistake is made, in time to correct the error before it is included in the finished column of figures. All keys are located within the normal span of the operator's hand, encouraging touch operation. Automatic totals or subtotals are printed in red. Negative totals also appear in red, with an automatic

"CR" symbol. Model 93 can be ordered in green, desert sage, white, or gray, in electric or manual models. Send for descriptive brochure No. A-1163.

(For Further Details Circle Index Code 011)

PORTABLE SEWING MACHINE

The Singer Sewing Machine Co., New York City, has introduced a new portable sewing machine designed for students and young



All Attachments Included

homemakers. This economical model incorporates many features usually found in higher-priced models, such as forward and reverse stitching, calibrated throat plate, stitch-length regulator, etc. The lightweight portable is offered in two-tone green with matching carrying case and a full set of attachments.

(For Further Details Circle Index Code 012)

(Concluded on page 78)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

Monroe **FOLDING PEDESTAL BANQUET TABLES**

SOLD DIRECT
Over 50 years experience
and service back Monroe
Folding Tables and other
products. Largest factory
in the world selling fold-
ing tables direct to schools,
churches, lodges, clubs, ho-
tels, and other institutions.

**Factory Prices
and Discounts**
Our catalogs are our only
salesmen. Our manufac-
turing and distribution savings
organizations and institutions,
like the over 51,000 whom
we have served.

**All Steel
Folding Chairs**
Monroe All Steel chairs in attrac-
tive range of styles at
direct prices. Ex-
cellent in comfort,
durability, and ease of handling.

**Transport Trucks
For Tables and Chairs**
Any room set up or cleared
in a jiffy. One man can do
it all. Ideal for storing.
Model TSS shown.

Portable Partitions
Panels in tubular steel
frames, on swivel glides or
casters. Ideal space conser-
ving in useful areas. Also
chalkboard finished, with
cork tack boards as shown.

**MONROE
No. 3
Deluxe
30 in. wide
30 in. high**

**Easily Seats 10
(5 on each side)**

Maximum seating capacity and comfort. Exclusive
MONROE folding steel pedestals eliminate knee in-
terference. Folds flat. 12 tables "stack" only 20
inches high. Ideal for school, church, social and recre-
ational activities. This model offered in three
finishes: Tempered Masonite, Ornacel, Blon-D and Melamine Plastic.

**Monroe Fold Lite
Utility Tables**
Conventional style, 16 in. wide
from 32" x 32" up
to 3' x 10' and 4' x
6'. Special sizes to
order. Masonite and
Ornacel Blon-D tops.

Adjustable Height Folding Tables
Can be adjusted any height 20 to 30 inches. Fold-
ing pedestals or legs. No tools required. Will not
slip or collapse.

**Monroe Folding Risers
and Platforms**
Most modern staging church groups, etc. Ruggedly
built sections with steel folding legs. Many stand-
ard settings or specials to order.

COMPLETE CATALOG FREE
House, purchase or kitchen committees of churches,
schools, clubs, lodges, etc. Write at once for
newest Monroe Line Institutional Catalog in colors.
Complete prices, discounts and terms. Address:

THE MONROE COMPANY 6 Church St. COLFAX, IOWA

premier quality engravings
SERVICE • DEPENDABILITY

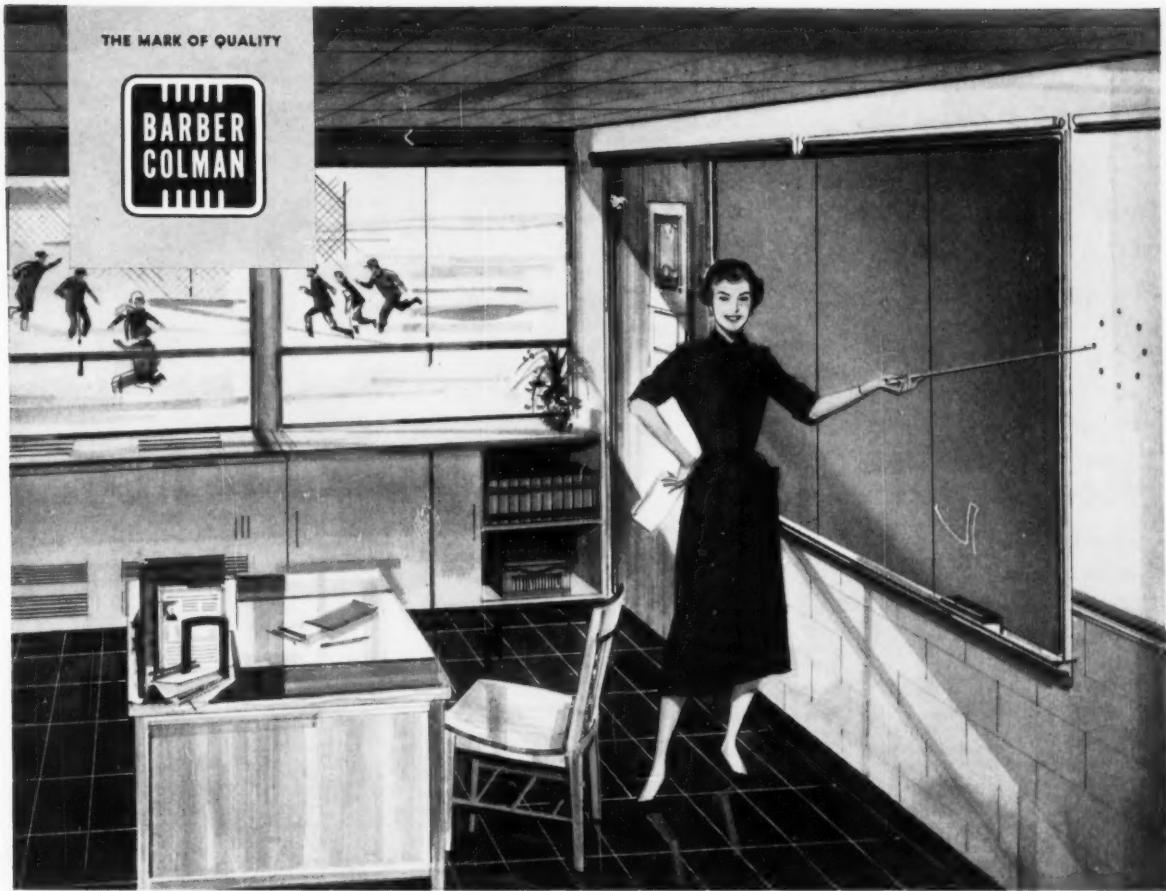
LINE ENGRAVING

COLOR PROCESS

HALF TONES

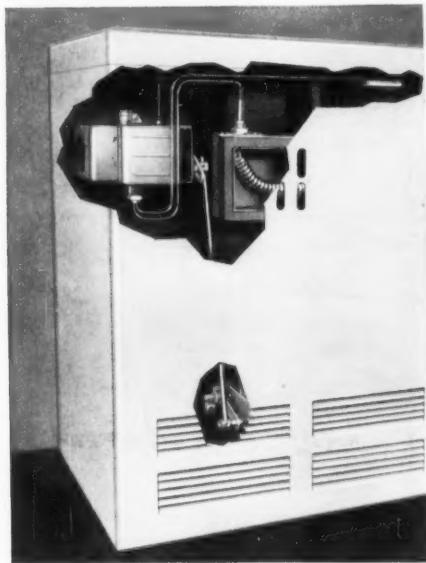
the premier engraving co.
AND ART STUDIO.

618 W. WINNEBAGO ST.
MILWAUKEE 2, WISCONSIN



Look...no wall thermostat!

New Controls with Unit-Mounted Thermostats Are . . .



All controls are inside

**MORE ACCURATE • PROTECTED FROM DUST
TAMPERPROOF • FASTER RESPONDING**

Barber-Colman now offers the most advanced "packaged" control systems" for every unit ventilator installation—steam, hot water, hot and chilled water, gas and electric.

All elements of a Barber-Colman unit ventilator control system, *including the thermostat*, are mounted within the unit ventilator enclosure. This eliminates the need for a wall-mounted thermostat, substantially reducing installation costs and providing greater control accuracy. It also means that factory installation of controls is practical.

Having the thermostat mechanism enclosed in the unit eliminates chalk dust and dirt problems. Temperature tampering is also eliminated. Even more important, unit mounting permits superior control through the use of the "dual element" aspirated thermostat principle. This is the approved temperature control principle employed in the most exacting laboratory installations.

Ask for booklets entitled "Better Control Electrically" and "Unit Ventilator Application File." These two new booklets explain why Barber-Colman electric control is superior and give specifications and details on control systems for all leading makes and models of unit ventilators. Call your Barber-Colman representative or write today.

BARBER-COLMAN COMPANY

Dept. N, 1334 Rock Street, Rockford, Illinois

Superior Design, Construction and PERFORMANCE

far greater strength and SAFETY!

AMERICAN Approved

PLAYGROUND AND SWIMMING POOL EQUIPMENT

The wise choice of experienced buyers for nearly half a century.

WRITE FOR LITERATURE

AMERICAN
PLAYGROUND DEVICE CO.,
ANDERSON, INDIANA, U.S.A.
WORLD'S LARGEST MANUFACTURERS OF FINE PARK, PICNIC, PLAYGROUND, SWIMMING POOL AND DRESSING ROOM EQUIPMENT

News of Products . . .

(Concluded from page 76)

BLEACHER POWER CONTROL

Fred Medart Products, Inc., St. Louis 18, Mo., has announced a power unit control for automatic operation of telescopic gym seats. Operated by a single control switch, the Bank Mover opens or closes any number of seat sections in rows as long as 112 ft. and 15 rows high. Seat sections up to 21 seat rows high can be automatically operated in total length up to 80 ft. Similar to the firm's Unit Mover for single seat sections, the Bank Mover is built into the seat and requires no floor tracks or building changes. The switch control is operated with a removable key and can be remotely installed anywhere within view of the seats. Complete details are available from the company.

(For Further Details Circle Index Code 013)

LIGHTWEIGHT PROJECTOR STAND

A portable projector stand, manufactured by Safe-Lock, Inc., Hialeah, Fla., eliminates make-shift mounting so that the projected beams will clear the heads of the audience. Called Extra-High Model 203-56, it has "Safe-Lock" round clutch collars on all four legs of the table to facilitate locking or releasing. Write to the manufacturer for more details.

(For Further Details Circle Index Code 014)

CATALOGS AND BOOKLETS

The 1959 catalog from Delta Products Div., Air Accessories, Inc., Fort Worth, Tex., describes formed plastic office accessories, such as convenience trays, wastebaskets, letter trays, chair mats, desk tops, and office and industrial signs.

(For Further Details Circle Index Code 015)

"The Big Change in Schoolhouse Materials Is the Return to Wood," proclaims a booklet distributed by the Southern Pine Association, New Orleans 4, La. The illustrated booklet describes wood construction that is fire resistant and low cost.

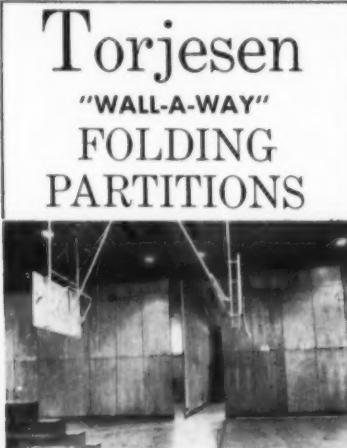
(For Further Details Circle Index Code 016)

An 8-page booklet on Kemrock, heavy-duty sandstone surfaces particularly recommended for laboratory table tops, has been recently released by the Keweenaw Mfg. Co., Adrian, Mich.

(For Further Details Circle Index Code 017)

"How to Select a Boiler" is a 20-page guide recently released by Cleaver-Brooks, Milwaukee, Wis. The illustrated booklet, written especially for members of school boards, covers pertinent questions on the selection of packaged boilers for schools.

(For Further Details Circle Index Code 018)



ELECTRICAL OR MANUAL OPERATION
TO DIVIDE GYMNASIUMS, AUDITORIUMS
CLASSROOMS, OFFICES, ETC.

NOW—for the same price as duck, you can have a Vinyl or "Toroply" covered partition that cuts maintenance costs 75% to 80%.

Send for detailed catalog with list of local representatives

TORJESSEN, INC.
209-25th St., Brooklyn 32, N.Y.
Telephone: SOuth 8-1020



Checker
COAT and HAT RACKS

Style D P. 4-40, Portable Checker Rack (illustrated) is 4 ft. 2 in. long; holds 40 coats and hats; goes wherever needed on large, ball-bearing-swivel casters. Comes with or without checks and snap-on numbers. Strongly welded of square tubular, heavy gauge and highly embossed furniture steel. Smart in modern baked finishes. Give lifetime service—never sag, creak or sway. 3 ft. 4 & 5 ft. units available as well as other efficient space saving equipment for every church, school, commercial, industrial and institutional need.

Write for Bulletin CK-206

VOGEL-PETERSON CO.
1121 W. 37th Street • Chicago 9, Illinois

"Launching Your A-V Program" is a 16-page guide for school administrators in setting up an audio-visual program in public or private schools. Send for a sample copy from Audio-Visual Commission on Public Information, New York 19, N.Y.

(For Further Details Circle Index Code 019)

CORRESPONDING CODE INDEX NUMBERS TO BE ENCIRCLED CAN BE FOUND ON THE CARDS IN THE READER'S SERVICE SECTION

MANUFACTURER'S NEWS

Safeway Steel Products, Inc., Milwaukee, Wis., has been named the exclusive distributor of Aldek Products, manufactured by **Aluminum Safety Products, Inc.**, New York. The Aldek line consists of aluminum stairways, scaffolds, spans, mobile bridge scaffolds, and ladders.

DICK BLICK

AMERICA'S
FOREMOST SUPPLIERS OF

- FINE ART
- DISPLAY ART
- SIGN ART
- MATERIALS

DICK BLICK

FREE Catalog
Write SJ29

GALESBURG, ILLINOIS

READER'S SERVICE SECTION

INDEX TO SCHOOL EQUIPMENT

The index and digest of advertisements below will help you obtain free information, catalogs, and product literature from the advertisements and companies listed in the new products section. Merely encircle the code number assigned to each firm in the request form below, clip the form and mail it to THE AMERICAN SCHOOL BOARD JOURNAL. Your request will receive prompt attention.

Code No.	Page No.	Code No.	Page No.
20 Allen Business Machines, Inc., R. C.	54	214 Dick Blick Company.....	78 Art supplies. Free catalog
Business machines			
21 American Bitumuls & Asphalt Company	13	215 Dodge Div. Chrysler Motors.....	61 School buses
Playground surfacing			
22 American Crayon Company.....	74	216 Eberhard Faber Pencil Co., Inc....	52 Chalkboard white liner pencil
New Prang drawing pencil			
23 American Desk Mfg. Co.	ins. bet 68 & 71	217 Gamewell Co.	74 Fire insurance
School furniture			
24 American Playground Device Company	78	218 Griggs Equipment, Inc.	51 Tempo desk and chair
Playground and swimming pool equipment			
25 American Seating Company	ins. between 36 & 41	219 Hampden Specialty Products, Inc.	66 School seating
School furniture			
26 Barber-Colman Company	77	220 Heywood-Wakefield Co.	53 School furniture
Unit mounted thermostats			
27 Berlin Chapman Company.....	73	221 Hillyard Chemical Company.....	18 Maintenance materials and equipment
Mechanical folding bleacher operation			
28 Butler Manufacturing Company....	14	222 Holden Patent Book Cover Co.	67 Book cover protection
Metal buildings			
29 Chevrolet Motor Div. General Motors Corp.	15	223 Hunt Pen Co., C. Howard.....	65 Pencil sharpeners
School bus chassis			
210 Clardige Products & Equipment Inc.	2nd cover	224 International Business Machines Corp.	16 & 17 Electric typewriters
Chalkboards, bulletin boards, etc.			
211 Collier & Son Corp. P. F.	71	225 Johnson Service Company.....	1 Pneumatic controls
Encyclopedias			
212 Cramer Posture Chair Co., Inc....	64	226 Keweenaw Mfg. Company.....	55 Laboratory furniture
Posture chair and desk			
213 Delta - Rockwell Power Tool Division	66	227 Keystone View Company.....	60 Overhead projector
New catalog			
214 Dick Blick Company.....	78 Art supplies. Free catalog	228 Krueger Metal Products Co.	54 Metal folding chairs & demountable chair trucks
215 Dodge Div. Chrysler Motors.....	61 School buses	229 Laboratory Furniture Co.	54 School science furniture
216 Eberhard Faber Pencil Co., Inc....	52 Chalkboard white liner pencil	230 Medart Products, Inc., Fred. .4th cover	
217 Gamewell Co.	74 Fire insurance		
218 Griggs Equipment, Inc.	51 Tempo desk and chair		
219 Hampden Specialty Products, Inc.	66 School seating		
220 Heywood-Wakefield Co.	53 School furniture		
221 Hillyard Chemical Company.....	18 Maintenance materials and equipment		
222 Holden Patent Book Cover Co.	67 Book cover protection		
223 Hunt Pen Co., C. Howard.....	65 Pencil sharpeners		
224 International Business Machines Corp.	16 & 17 Electric typewriters		
225 Johnson Service Company.....	1 Pneumatic controls		
226 Keweenaw Mfg. Company.....	55 Laboratory furniture		
227 Keystone View Company.....	60 Overhead projector		
228 Krueger Metal Products Co.	54 Metal folding chairs & demountable chair trucks		
229 Laboratory Furniture Co.	54 School science furniture		
230 Medart Products, Inc., Fred. .4th cover	Telescopic gym seats		

USE THESE CARDS

These cards are provided for the convenience of THE AMERICAN SCHOOL BOARD JOURNAL readers in requesting information on products, services, booklets, and catalogs offered by the advertisers in this issue.

<p>THE AMERICAN SCHOOL BOARD JOURNAL 400 North Broadway, Milwaukee 1, Wis.</p> <p>Please ask the manufacturer, whose code numbers I have encircled, to send me free information, catalog or product literature as mentioned in this issue of the JOURNAL.</p>	<p>February, 1959</p> <p>THE AMERICAN SCHOOL BOARD JOURNAL 400 North Broadway, Milwaukee 1, Wis.</p> <p>Please ask the manufacturer, whose code numbers I have encircled, to send me free information, catalog or product literature as mentioned in this issue of the JOURNAL.</p>	<p>ADVERTISING INDEX</p> <table border="0"> <tr><td>20</td><td>23</td><td>26</td><td>29</td><td>312</td><td>315</td><td>318</td><td>321</td><td>324</td><td>326</td><td>329</td><td>336</td><td>339</td><td>342</td><td>345</td></tr> <tr><td>21</td><td>24</td><td>27</td><td>30</td><td>310</td><td>313</td><td>316</td><td>319</td><td>322</td><td>324</td><td>327</td><td>334</td><td>337</td><td>340</td><td>343</td></tr> <tr><td>22</td><td>25</td><td>28</td><td>31</td><td>311</td><td>314</td><td>317</td><td>320</td><td>323</td><td>325</td><td>328</td><td>335</td><td>338</td><td>341</td><td>344</td></tr> <tr><td>23</td><td>26</td><td>29</td><td>32</td><td>311</td><td>314</td><td>317</td><td>320</td><td>323</td><td>326</td><td>329</td><td>336</td><td>339</td><td>342</td><td>345</td></tr> <tr><td>24</td><td>27</td><td>30</td><td>33</td><td>312</td><td>315</td><td>318</td><td>321</td><td>324</td><td>327</td><td>330</td><td>337</td><td>340</td><td>343</td><td>346</td></tr> <tr><td>25</td><td>28</td><td>31</td><td>34</td><td>313</td><td>316</td><td>319</td><td>322</td><td>325</td><td>328</td><td>331</td><td>338</td><td>341</td><td>344</td><td>347</td></tr> <tr><td>26</td><td>29</td><td>32</td><td>35</td><td>314</td><td>317</td><td>320</td><td>323</td><td>326</td><td>329</td><td>332</td><td>339</td><td>342</td><td>345</td><td>348</td></tr> <tr><td>27</td><td>30</td><td>33</td><td>36</td><td>315</td><td>318</td><td>321</td><td>324</td><td>327</td><td>330</td><td>333</td><td>340</td><td>343</td><td>346</td><td>349</td></tr> <tr><td>28</td><td>31</td><td>34</td><td>37</td><td>316</td><td>319</td><td>322</td><td>325</td><td>328</td><td>331</td><td>334</td><td>341</td><td>344</td><td>347</td><td>350</td></tr> <tr><td>29</td><td>32</td><td>35</td><td>38</td><td>317</td><td>320</td><td>323</td><td>326</td><td>329</td><td>332</td><td>335</td><td>342</td><td>345</td><td>348</td><td>351</td></tr> <tr><td>30</td><td>33</td><td>36</td><td>39</td><td>318</td><td>321</td><td>324</td><td>327</td><td>330</td><td>333</td><td>336</td><td>343</td><td>346</td><td>349</td><td>352</td></tr> <tr><td>31</td><td>34</td><td>37</td><td>40</td><td>319</td><td>322</td><td>325</td><td>328</td><td>331</td><td>334</td><td>337</td><td>344</td><td>347</td><td>350</td><td>353</td></tr> <tr><td>32</td><td>35</td><td>38</td><td>41</td><td>320</td><td>323</td><td>326</td><td>329</td><td>332</td><td>335</td><td>338</td><td>345</td><td>348</td><td>351</td><td>354</td></tr> <tr><td>33</td><td>36</td><td>39</td><td>42</td><td>321</td><td>324</td><td>327</td><td>330</td><td>333</td><td>336</td><td>339</td><td>346</td><td>349</td><td>352</td><td>355</td></tr> <tr><td>34</td><td>37</td><td>40</td><td>43</td><td>322</td><td>325</td><td>328</td><td>331</td><td>334</td><td>337</td><td>340</td><td>347</td><td>350</td><td>353</td><td>356</td></tr> <tr><td>35</td><td>38</td><td>41</td><td>44</td><td>323</td><td>326</td><td>329</td><td>332</td><td>335</td><td>338</td><td>341</td><td>348</td><td>351</td><td>354</td><td>357</td></tr> <tr><td>36</td><td>39</td><td>42</td><td>45</td><td>324</td><td>327</td><td>330</td><td>333</td><td>336</td><td>339</td><td>342</td><td>349</td><td>352</td><td>355</td><td>358</td></tr> <tr><td>37</td><td>40</td><td>43</td><td>46</td><td>325</td><td>328</td><td>331</td><td>334</td><td>337</td><td>340</td><td>343</td><td>350</td><td>353</td><td>356</td><td>359</td></tr> <tr><td>38</td><td>41</td><td>44</td><td>47</td><td>326</td><td>329</td><td>332</td><td>335</td><td>338</td><td>341</td><td>344</td><td>351</td><td>354</td><td>357</td><td>360</td></tr> <tr><td>39</td><td>42</td><td>45</td><td>48</td><td>327</td><td>330</td><td>333</td><td>336</td><td>339</td><td>342</td><td>345</td><td>352</td><td>355</td><td>358</td><td>361</td></tr> <tr><td>40</td><td>43</td><td>46</td><td>49</td><td>328</td><td>331</td><td>334</td><td>337</td><td>340</td><td>343</td><td>346</td><td>353</td><td>356</td><td>359</td><td>362</td></tr> <tr><td>41</td><td>44</td><td>47</td><td>50</td><td>329</td><td>332</td><td>335</td><td>338</td><td>341</td><td>344</td><td>347</td><td>354</td><td>357</td><td>360</td><td>363</td></tr> <tr><td>42</td><td>45</td><td>48</td><td>51</td><td>330</td><td>333</td><td>336</td><td>339</td><td>342</td><td>345</td><td>348</td><td>355</td><td>358</td><td>361</td><td>364</td></tr> <tr><td>43</td><td>46</td><td>49</td><td>52</td><td>331</td><td>334</td><td>337</td><td>340</td><td>343</td><td>346</td><td>349</td><td>356</td><td>359</td><td>362</td><td>365</td></tr> <tr><td>44</td><td>47</td><td>50</td><td>53</td><td>332</td><td>335</td><td>338</td><td>341</td><td>344</td><td>347</td><td>350</td><td>357</td><td>360</td><td>363</td><td>366</td></tr> <tr><td>45</td><td>48</td><td>51</td><td>54</td><td>333</td><td>336</td><td>339</td><td>342</td><td>345</td><td>348</td><td>351</td><td>358</td><td>361</td><td>364</td><td>367</td></tr> <tr><td>46</td><td>49</td><td>52</td><td>55</td><td>334</td><td>337</td><td>340</td><td>343</td><td>346</td><td>349</td><td>352</td><td>359</td><td>362</td><td>365</td><td>368</td></tr> <tr><td>47</td><td>50</td><td>53</td><td>56</td><td>335</td><td>338</td><td>341</td><td>344</td><td>347</td><td>350</td><td>353</td><td>360</td><td>363</td><td>366</td><td>369</td></tr> <tr><td>48</td><td>51</td><td>54</td><td>57</td><td>336</td><td>339</td><td>342</td><td>345</td><td>348</td><td>351</td><td>354</td><td>361</td><td>364</td><td>367</td><td>370</td></tr> <tr><td>49</td><td>52</td><td>55</td><td>58</td><td>337</td><td>340</td><td>343</td><td>346</td><td>349</td><td>352</td><td>355</td><td>362</td><td>365</td><td>368</td><td>371</td></tr> <tr><td>50</td><td>53</td><td>56</td><td>59</td><td>338</td><td>341</td><td>344</td><td>347</td><td>350</td><td>353</td><td>356</td><td>363</td><td>366</td><td>369</td><td>372</td></tr> <tr><td>51</td><td>54</td><td>57</td><td>60</td><td>339</td><td>342</td><td>345</td><td>348</td><td>351</td><td>354</td><td>357</td><td>364</td><td>367</td><td>370</td><td>373</td></tr> <tr><td>52</td><td>55</td><td>58</td><td>61</td><td>340</td><td>343</td><td>346</td><td>349</td><td>352</td><td>355</td><td>358</td><td>365</td><td>368</td><td>371</td><td>374</td></tr> <tr><td>53</td><td>56</td><td>59</td><td>62</td><td>341</td><td>344</td><td>347</td><td>350</td><td>353</td><td>356</td><td>359</td><td>366</td><td>369</td><td>372</td><td>375</td></tr> <tr><td>54</td><td>57</td><td>60</td><td>63</td><td>342</td><td>345</td><td>348</td><td>351</td><td>354</td><td>357</td><td>360</td><td>367</td><td>370</td><td>373</td><td>376</td></tr> <tr><td>55</td><td>58</td><td>61</td><td>64</td><td>343</td><td>346</td><td>349</td><td>352</td><td>355</td><td>358</td><td>361</td><td>368</td><td>371</td><td>374</td><td>377</td></tr> <tr><td>56</td><td>59</td><td>62</td><td>65</td><td>344</td><td>347</td><td>350</td><td>353</td><td>356</td><td>359</td><td>362</td><td>369</td><td>372</td><td>375</td><td>378</td></tr> <tr><td>57</td><td>60</td><td>63</td><td>66</td><td>345</td><td>348</td><td>351</td><td>354</td><td>357</td><td>360</td><td>363</td><td>370</td><td>373</td><td>376</td><td>379</td></tr> <tr><td>58</td><td>61</td><td>64</td><td>67</td><td>346</td><td>349</td><td>352</td><td>355</td><td>358</td><td>361</td><td>364</td><td>371</td><td>374</td><td>377</td><td>380</td></tr> <tr><td>59</td><td>62</td><td>65</td><td>68</td><td>347</td><td>350</td><td>353</td><td>356</td><td>359</td><td>362</td><td>365</td><td>372</td><td>375</td><td>378</td><td>381</td></tr> <tr><td>60</td><td>63</td><td>66</td><td>69</td><td>348</td><td>351</td><td>354</td><td>357</td><td>360</td><td>363</td><td>366</td><td>373</td><td>376</td><td>379</td><td>382</td></tr> <tr><td>61</td><td>64</td><td>67</td><td>70</td><td>349</td><td>352</td><td>355</td><td>358</td><td>361</td><td>364</td><td>367</td><td>374</td><td>377</td><td>380</td><td>383</td></tr> <tr><td>62</td><td>65</td><td>68</td><td>71</td><td>350</td><td>353</td><td>356</td><td>359</td><td>362</td><td>365</td><td>368</td><td>375</td><td>378</td><td>381</td><td>384</td></tr> <tr><td>63</td><td>66</td><td>69</td><td>72</td><td>351</td><td>354</td><td>357</td><td>360</td><td>363</td><td>366</td><td>369</td><td>376</td><td>379</td><td>382</td><td>385</td></tr> <tr><td>64</td><td>67</td><td>70</td><td>73</td><td>352</td><td>355</td><td>358</td><td>361</td><td>364</td><td>367</td><td>370</td><td>377</td><td>380</td><td>383</td><td>386</td></tr> <tr><td>65</td><td>68</td><td>71</td><td>74</td><td>353</td><td>356</td><td>359</td><td>362</td><td>365</td><td>368</td><td>371</td><td>378</td><td>381</td><td>384</td><td>387</td></tr> <tr><td>66</td><td>69</td><td>72</td><td>75</td><td>354</td><td>357</td><td>360</td><td>363</td><td>366</td><td>369</td><td>372</td><td>379</td><td>382</td><td>385</td><td>388</td></tr> <tr><td>67</td><td>70</td><td>73</td><td>76</td><td>355</td><td>358</td><td>361</td><td>364</td><td>367</td><td>370</td><td>373</td><td>380</td><td>383</td><td>386</td><td>389</td></tr> <tr><td>68</td><td>71</td><td>74</td><td>77</td><td>356</td><td>359</td><td>362</td><td>365</td><td>368</td><td>371</td><td>374</td><td>381</td><td>384</td><td>387</td><td>390</td></tr> <tr><td>69</td><td>72</td><td>75</td><td>78</td><td>357</td><td>360</td><td>363</td><td>366</td><td>369</td><td>372</td><td>375</td><td>382</td><td>385</td><td>388</td><td>391</td></tr> <tr><td>70</td><td>73</td><td>76</td><td>79</td><td>358</td><td>361</td><td>364</td><td>367</td><td>370</td><td>373</td><td>376</td><td>383</td><td>386</td><td>389</td><td>392</td></tr> <tr><td>71</td><td>74</td><td>77</td><td>80</td><td>359</td><td>362</td><td>365</td><td>368</td><td>371</td><td>374</td><td>377</td><td>384</td><td>387</td><td>390</td><td>393</td></tr> <tr><td>72</td><td>75</td><td>78</td><td>81</td><td>360</td><td>363</td><td>366</td><td>369</td><td>372</td><td>375</td><td>378</td><td>385</td><td>388</td><td>391</td><td>394</td></tr> <tr><td>73</td><td>76</td><td>79</td><td>82</td><td>361</td><td>364</td><td>367</td><td>370</td><td>373</td><td>376</td><td>379</td><td>386</td><td>389</td><td>392</td><td>395</td></tr> <tr><td>74</td><td>77</td><td>80</td><td>83</td><td>362</td><td>365</td><td>368</td><td>371</td><td>374</td><td>377</td><td>380</td><td>387</td><td>390</td><td>393</td><td>396</td></tr> <tr><td>75</td><td>78</td><td>81</td><td>84</td><td>363</td><td>366</td><td>369</td><td>372</td><td>375</td><td>378</td><td>381</td><td>388</td><td>391</td><td>394</td><td>397</td></tr> <tr><td>76</td><td>79</td><td>82</td><td>85</td><td>364</td><td>367</td><td>370</td><td>373</td><td>376</td><td>379</td><td>382</td><td>389</td><td>392</td><td>395</td><td>398</td></tr> <tr><td>77</td><td>80</td><td>83</td><td>86</td><td>365</td><td>368</td><td>371</td><td>374</td><td>377</td><td>380</td><td>383</td><td>390</td><td>393</td><td>396</td><td>399</td></tr> <tr><td>78</td><td>81</td><td>84</td><td>87</td><td>366</td><td>369</td><td>372</td><td>375</td><td>378</td><td>381</td><td>384</td><td>391</td><td>394</td><td>397</td><td>400</td></tr> <tr><td>79</td><td>82</td><td>85</td><td>88</td><td>367</td><td>370</td><td>373</td><td>376</td><td>379</td><td>382</td><td>385</td><td>392</td><td>395</td><td>398</td><td>401</td></tr> <tr><td>80</td><td>83</td><td>86</td><td>89</td><td>368</td><td>371</td><td>374</td><td>377</td><td>380</td><td>383</td><td>386</td><td>393</td><td>396</td><td>399</td><td>402</td></tr> <tr><td>81</td><td>84</td><td>87</td><td>90</td><td>369</td><td>372</td><td>375</td><td>378</td><td>381</td><td>384</td><td>387</td><td>394</td><td>397</td><td>400</td><td>403</td></tr> <tr><td>82</td><td>85</td><td>88</td><td>91</td><td>370</td><td>373</td><td>376</td><td>379</td><td>382</td><td>385</td><td>388</td><td>395</td><td>398</td><td>401</td><td>404</td></tr> <tr><td>83</td><td>86</td><td>89</td><td>92</td><td>371</td><td>374</td><td>377</td><td>380</td><td>383</td><td>386</td><td>389</td><td>396</td><td>399</td><td>402</td><td>405</td></tr> <tr><td>84</td><td>87</td><td>90</td><td>93</td><td>372</td><td>375</td><td>378</td><td>381</td><td>384</td><td>387</td><td>390</td><td>397</td><td>400</td><td>403</td><td>406</td></tr> <tr><td>85</td><td>88</td><td>91</td><td>94</td><td>373</td><td>376</td><td>379</td><td>382</td><td>385</td><td>388</td><td>391</td><td>398</td><td>401</td><td>404</td><td>407</td></tr> <tr><td>86</td><td>89</td><td>92</td><td>95</td><td>374</td><td>377</td><td>380</td><td>383</td><td>386</td><td>389</td><td>392</td><td>399</td><td>402</td><td>405</td><td>408</td></tr> <tr><td>87</td><td>90</td><td>93</td><td>96</td><td>375</td><td>378</td><td>381</td><td>384</td><td>387</td><td>390</td><td>393</td><td>400</td><td>403</td><td>406</td><td>409</td></tr> <tr><td>88</td><td>91</td><td>94</td><td>97</td><td>376</td><td>379</td><td>382</td><td>385</td><td>388</td><td>391</td><td>394</td><td>401</td><td>404</td><td>407</td><td>410</td></tr> <tr><td>89</td><td>92</td><td>95</td><td>98</td><td>377</td><td>380</td><td>383</td><td>386</td><td>389</td><td>392</td><td>395</td><td>402</td><td>405</td><td>408</td><td>411</td></tr> <tr><td>90</td><td>93</td><td>96</td><td>99</td><td>378</td><td>381</td><td>384</td><td>387</td><td>390</td><td>393</td><td>396</td><td>403</td><td>406</td><td>409</td><td>412</td></tr> <tr><td>91</td><td>94</td><td>97</td><td>100</td><td>379</td><td>382</td><td>385</td><td>388</td><td>391</td><td>394</td><td>397</td><td>404</td><td>407</td><td>410</td><td>413</td></tr> <tr><td>92</td><td>95</td><td>98</td><td>101</td><td>380</td><td>383</td><td>386</td><td>389</td><td>392</td><td>395</td><td>398</td><td>405</td><td>408</td><td>411</td><td>414</td></tr> <tr><td>93</td><td>96</td><td>99</td><td>102</td><td>381</td><td>384</td><td>387</td><td>390</td><td>393</td><td>396</td><td>399</td><td>406</td><td>409</td><td>412</td><td>415</td></tr> <tr><td>94</td><td>97</td><td>100</td><td>103</td><td>382</td><td>385</td><td>388</td><td>391</td><td>394</td><td>397</td><td>400</td><td>407</td><td>410</td><td>413</td><td>416</td></tr> <tr><td>95</td><td>98</td><td>101</td><td>104</td><td>383</td><td>386</td><td>389</td><td>392</td><td>395</td><td>398</td><td>401</td><td>408</td><td>411</td><td>414</td><td>417</td></tr> <tr><td>96</td><td>99</td><td>102</td><td>105</td><td>384</td><td>387</td><td>390</td><td>393</td><td>396</td><td>399</td><td>402</td><td>409</td><td>412</td><td>415</td><td>418</td></tr> <tr><td>97</td><td>100</td><td>103</td><td>106</td><td>385</td><td>388</td><td>391</td><td>394</td><td>397</td><td>400</td><td>403</td><td>410</td><td>413</td><td>416</td><td>419</td></tr> <tr><td>98</td><td>101</td><td>104</td><td>107</td><td>386</td><td>389</td><td>392</td><td>395</td><td>398</td><td>401</td><td>404</td><td>411</td><td>414</td><td>417</td><td>420</td></tr> <tr><td>99</td><td>102</td><td>105</td><td>108</td><td>387</td><td>390</td><td>393</td><td>396</td><td>399</td><td>402</td><td>405</td><td>412</td><td>415</td><td>418</td><td>421</td></tr> <tr><td>100</td><td>103</td><td>106</td><td>109</td><td>388</td><td>391</td><td>394</td><td>397</td><td>400</td><td>403</td><td>406</td><td>413</td><td>416</td><td>419</td><td>422</td></tr> <tr><td>101</td><td>104</td><td>107</td><td>110</td><td>389</td><td>392</td><td>395</td><td>398</td><td>401</td><td>404</td><td>407</td><td>414</td><td>417</td><td>420</td><td>423</td></tr> <tr><td>102</td><td>105</td><td>108</td><td>111</td><td>390</td><td>393</td><td>396</td><td>399</td><td>402</td><td>405</td><td>408</td><td>415</td><td>418</td><td>421</td><td>424</td></tr> <tr><td>103</td><td>106</td><td>109</td><td>112</td><td>391</td><td>394</td><td>397</td><td>400</td><td>403</td><td>406</td><td>409</td><td>416</td><td>419</td><td>422</td><td>425</td></tr> <tr><td>104</td><td>107</td><td>110</td><td>113</td><td>392</td><td>395</td><td>398</td><td>401</td><td>404</td><td>407</td><td>410</td><td>417</td><td>420</td><td>423</td><td>426</td></tr> <tr><td>105</td><td>108</td><td>111</td><td>114</td><td>393</td><td>396</td><td>399</td><td>402</td><td>405</td><td>408</td><td>411</td><td>418</td><td>421</td><td>424</td><td>427</td></tr> <tr><td>106</td><td>109</td><td>112</td><td>115</td><td>394</td><td>397</td><td>400</td><td>403</td><td>406</td><td>409</td><td>412</td><td>419</td><td>422</td><td>425</td><td>428</td></tr> <tr><td>107</td><td>110</td><td>113</td><td>116</td><td>395</td><td>398</td><td>401</td><td>404</td><td>407</td><td>410</td><td>413</td><td>420</td><td>423</td><td>426</td><td>429</td></tr> <tr><td>108</td><td>111</td><td>114</td><td>117</td><td>396</td><td>399</td><td>402</td><td>405</td><td>408</td><td>411</td><td>414</td><td>421</td><td>424</td><td>427</td><td>430</td></tr> <tr><td>109</td><td>112</td><td>115</td><td>118</td><td>397</td><td>400</td><td>403</td><td>406</td><td>409</td><td>412</td><td>415</td><td>422</td><td>425</td><td>428</td><td>431</td></tr> <tr><td>110</td><td>113</td><td>116</td><td>119</td><td>398</td><td>401</td><td>404</td><td>407</td><td>410</td><td>413</td><td>416</td><td>423</td><td>426</td><td>429</td><td>432</td></tr> <tr><td>111</td><td>114</td><td>117</td><td>120</td><td>399</td><td>402</td><td>405</td><td>408</td><td>411</td><td>414</td><td>417</td><td>424</td><td>427</td><td>430</td><td>433</td></tr> <tr><td>112</td><td>115</td><td>118</td><td>121</td><td>400</td><td>403</td><td>406</td><td>409</td><td>412</td><td>415</td><td>418</td><td>425</td><td>428</td><td>431</td><td>434</td></tr> <tr><td>113</td><td>116</td><td>119</td><td>122</td><td>401</td><td>404</td><td>407</td><td>410</td><td>413</td><td>416</td><td>419</td><td>426</td><td>429</td><td>432</td><td>435</td></tr> <tr><td>114</td><td>117</td><td>120</td><td>123</td><td>402</td><td>405</td><td>408</td><td>411</td><td>414</td><td>417</td><td>420</td><td>427</td><td>430</td><td>433</td><td>436</td></tr> <tr><td>115</td><td>118</td><td>121</td><td>124</td><td>403</td><td>406</td><td>409</td><td>412</td><td>415</td><td>418</td><td>421</td><td>428</td><td>431</td><td>434</td><td>437</td></tr> <tr><td>116</td><td>119</td><td>122</td><td>125</td><td>404</td><td>407</td><td>410</td><td>413</td><td>416</td><td>419</td><td>422</td><td>429</td><td>432</td><td>435</td><td>438</td></tr> <tr><td>117</td><td>120</td><td>123</td><td>126</td><td>405</td><td>408</td><td>411</td><td>414</td><td>417</td><td>420</td><td>423</td><td>430</td><td>433</td><td>436</td><td>439</td></tr> <tr><td>118</td><td>121</td><td>124</td><td>127</td><td>406</td><td>409</td><td>412</td><td>415</td><td>418</td><td>421</td><td>424</td><td>431</td><td>434</td><td>437</td><td>440</td></tr> <tr><td>119</td><td>122</td><td>125</td><td>128</td><td>407</td><td>410</td><td>413</td><td>416</td><td>419</td><td>422</td><td>425</td><td>432</td><td>435</td><td>438</td><td>441</td></tr> <tr><td>120</td><td>123</td><td>126</td><td</tr></table>	20	23	26	29	312	315	318	321	324	326	329	336	339	342	345	21	24	27	30	310	313	316	319	322	324	327	334	337	340	343	22	25	28	31	311	314	317	320	323	325	328	335	338	341	344	23	26	29	32	311	314	317	320	323	326	329	336	339	342	345	24	27	30	33	312	315	318	321	324	327	330	337	340	343	346	25	28	31	34	313	316	319	322	325	328	331	338	341	344	347	26	29	32	35	314	317	320	323	326	329	332	339	342	345	348	27	30	33	36	315	318	321	324	327	330	333	340	343	346	349	28	31	34	37	316	319	322	325	328	331	334	341	344	347	350	29	32	35	38	317	320	323	326	329	332	335	342	345	348	351	30	33	36	39	318	321	324	327	330	333	336	343	346	349	352	31	34	37	40	319	322	325	328	331	334	337	344	347	350	353	32	35	38	41	320	323	326	329	332	335	338	345	348	351	354	33	36	39	42	321	324	327	330	333	336	339	346	349	352	355	34	37	40	43	322	325	328	331	334	337	340	347	350	353	356	35	38	41	44	323	326	329	332	335	338	341	348	351	354	357	36	39	42	45	324	327	330	333	336	339	342	349	352	355	358	37	40	43	46	325	328	331	334	337	340	343	350	353	356	359	38	41	44	47	326	329	332	335	338	341	344	351	354	357	360	39	42	45	48	327	330	333	336	339	342	345	352	355	358	361	40	43	46	49	328	331	334	337	340	343	346	353	356	359	362	41	44	47	50	329	332	335	338	341	344	347	354	357	360	363	42	45	48	51	330	333	336	339	342	345	348	355	358	361	364	43	46	49	52	331	334	337	340	343	346	349	356	359	362	365	44	47	50	53	332	335	338	341	344	347	350	357	360	363	366	45	48	51	54	333	336	339	342	345	348	351	358	361	364	367	46	49	52	55	334	337	340	343	346	349	352	359	362	365	368	47	50	53	56	335	338	341	344	347	350	353	360	363	366	369	48	51	54	57	336	339	342	345	348	351	354	361	364	367	370	49	52	55	58	337	340	343	346	349	352	355	362	365	368	371	50	53	56	59	338	341	344	347	350	353	356	363	366	369	372	51	54	57	60	339	342	345	348	351	354	357	364	367	370	373	52	55	58	61	340	343	346	349	352	355	358	365	368	371	374	53	56	59	62	341	344	347	350	353	356	359	366	369	372	375	54	57	60	63	342	345	348	351	354	357	360	367	370	373	376	55	58	61	64	343	346	349	352	355	358	361	368	371	374	377	56	59	62	65	344	347	350	353	356	359	362	369	372	375	378	57	60	63	66	345	348	351	354	357	360	363	370	373	376	379	58	61	64	67	346	349	352	355	358	361	364	371	374	377	380	59	62	65	68	347	350	353	356	359	362	365	372	375	378	381	60	63	66	69	348	351	354	357	360	363	366	373	376	379	382	61	64	67	70	349	352	355	358	361	364	367	374	377	380	383	62	65	68	71	350	353	356	359	362	365	368	375	378	381	384	63	66	69	72	351	354	357	360	363	366	369	376	379	382	385	64	67	70	73	352	355	358	361	364	367	370	377	380	383	386	65	68	71	74	353	356	359	362	365	368	371	378	381	384	387	66	69	72	75	354	357	360	363	366	369	372	379	382	385	388	67	70	73	76	355	358	361	364	367	370	373	380	383	386	389	68	71	74	77	356	359	362	365	368	371	374	381	384	387	390	69	72	75	78	357	360	363	366	369	372	375	382	385	388	391	70	73	76	79	358	361	364	367	370	373	376	383	386	389	392	71	74	77	80	359	362	365	368	371	374	377	384	387	390	393	72	75	78	81	360	363	366	369	372	375	378	385	388	391	394	73	76	79	82	361	364	367	370	373	376	379	386	389	392	395	74	77	80	83	362	365	368	371	374	377	380	387	390	393	396	75	78	81	84	363	366	369	372	375	378	381	388	391	394	397	76	79	82	85	364	367	370	373	376	379	382	389	392	395	398	77	80	83	86	365	368	371	374	377	380	383	390	393	396	399	78	81	84	87	366	369	372	375	378	381	384	391	394	397	400	79	82	85	88	367	370	373	376	379	382	385	392	395	398	401	80	83	86	89	368	371	374	377	380	383	386	393	396	399	402	81	84	87	90	369	372	375	378	381	384	387	394	397	400	403	82	85	88	91	370	373	376	379	382	385	388	395	398	401	404	83	86	89	92	371	374	377	380	383	386	389	396	399	402	405	84	87	90	93	372	375	378	381	384	387	390	397	400	403	406	85	88	91	94	373	376	379	382	385	388	391	398	401	404	407	86	89	92	95	374	377	380	383	386	389	392	399	402	405	408	87	90	93	96	375	378	381	384	387	390	393	400	403	406	409	88	91	94	97	376	379	382	385	388	391	394	401	404	407	410	89	92	95	98	377	380	383	386	389	392	395	402	405	408	411	90	93	96	99	378	381	384	387	390	393	396	403	406	409	412	91	94	97	100	379	382	385	388	391	394	397	404	407	410	413	92	95	98	101	380	383	386	389	392	395	398	405	408	411	414	93	96	99	102	381	384	387	390	393	396	399	406	409	412	415	94	97	100	103	382	385	388	391	394	397	400	407	410	413	416	95	98	101	104	383	386	389	392	395	398	401	408	411	414	417	96	99	102	105	384	387	390	393	396	399	402	409	412	415	418	97	100	103	106	385	388	391	394	397	400	403	410	413	416	419	98	101	104	107	386	389	392	395	398	401	404	411	414	417	420	99	102	105	108	387	390	393	396	399	402	405	412	415	418	421	100	103	106	109	388	391	394	397	400	403	406	413	416	419	422	101	104	107	110	389	392	395	398	401	404	407	414	417	420	423	102	105	108	111	390	393	396	399	402	405	408	415	418	421	424	103	106	109	112	391	394	397	400	403	406	409	416	419	422	425	104	107	110	113	392	395	398	401	404	407	410	417	420	423	426	105	108	111	114	393	396	399	402	405	408	411	418	421	424	427	106	109	112	115	394	397	400	403	406	409	412	419	422	425	428	107	110	113	116	395	398	401	404	407	410	413	420	423	426	429	108	111	114	117	396	399	402	405	408	411	414	421	424	427	430	109	112	115	118	397	400	403	406	409	412	415	422	425	428	431	110	113	116	119	398	401	404	407	410	413	416	423	426	429	432	111	114	117	120	399	402	405	408	411	414	417	424	427	430	433	112	115	118	121	400	403	406	409	412	415	418	425	428	431	434	113	116	119	122	401	404	407	410	413	416	419	426	429	432	435	114	117	120	123	402	405	408	411	414	417	420	427	430	433	436	115	118	121	124	403	406	409	412	415	418	421	428	431	434	437	116	119	122	125	404	407	410	413	416	419	422	429	432	435	438	117	120	123	126	405	408	411	414	417	420	423	430	433	436	439	118	121	124	127	406	409	412	415	418	421	424	431	434	437	440	119	122	125	128	407	410	413	416	419	422	425	432	435	438	441	120	123	126
20	23	26	29	312	315	318	321	324	326	329	336	339	342	345																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
21	24	27	30	310	313	316	319	322	324	327	334	337	340	343																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
22	25	28	31	311	314	317	320	323	325	328	335	338	341	344																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
23	26	29	32	311	314	317	320	323	326	329	336	339	342	345																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
24	27	30	33	312	315	318	321	324	327	330	337	340	343	346																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
25	28	31	34	313	316	319	322	325	328	331	338	341	344	347																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
26	29	32	35	314	317	320	323	326	329	332	339	342	345	348																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
27	30	33	36	315	318	321	324	327	330	333	340	343	346	349																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
28	31	34	37	316	319	322	325	328	331	334	341	344	347	350																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
29	32	35	38	317	320	323	326	329	332	335	342	345	348	351																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
30	33	36	39	318	321	324	327	330	333	336	343	346	349	352																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
31	34	37	40	319	322	325	328	331	334	337	344	347	350	353																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
32	35	38	41	320	323	326	329	332	335	338	345	348	351	354																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
33	36	39	42	321	324	327	330	333	336	339	346	349	352	355																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
34	37	40	43	322	325	328	331	334	337	340	347	350	353	356																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
35	38	41	44	323	326	329	332	335	338	341	348	351	354	357																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
36	39	42	45	324	327	330	333	336	339	342	349	352	355	358																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
37	40	43	46	325	328	331	334	337	340	343	350	353	356	359																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
38	41	44	47	326	329	332	335	338	341	344	351	354	357	360																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
39	42	45	48	327	330	333	336	339	342	345	352	355	358	361																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
40	43	46	49	328	331	334	337	340	343	346	353	356	359	362																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
41	44	47	50	329	332	335	338	341	344	347	354	357	360	363																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
42	45	48	51	330	333	336	339	342	345	348	355	358	361	364																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
43	46	49	52	331	334	337	340	343	346	349	356	359	362	365																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
44	47	50	53	332	335	338	341	344	347	350	357	360	363	366																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
45	48	51	54	333	336	339	342	345	348	351	358	361	364	367																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
46	49	52	55	334	337	340	343	346	349	352	359	362	365	368																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
47	50	53	56	335	338	341	344	347	350	353	360	363	366	369																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
48	51	54	57	336	339	342	345	348	351	354	361	364	367	370																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
49	52	55	58	337	340	343	346	349	352	355	362	365	368	371																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
50	53	56	59	338	341	344	347	350	353	356	363	366	369	372																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
51	54	57	60	339	342	345	348	351	354	357	364	367	370	373																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
52	55	58	61	340	343	346	349	352	355	358	365	368	371	374																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
53	56	59	62	341	344	347	350	353	356	359	366	369	372	375																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
54	57	60	63	342	345	348	351	354	357	360	367	370	373	376																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
55	58	61	64	343	346	349	352	355	358	361	368	371	374	377																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
56	59	62	65	344	347	350	353	356	359	362	369	372	375	378																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
57	60	63	66	345	348	351	354	357	360	363	370	373	376	379																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
58	61	64	67	346	349	352	355	358	361	364	371	374	377	380																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
59	62	65	68	347	350	353	356	359	362	365	372	375	378	381																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
60	63	66	69	348	351	354	357	360	363	366	373	376	379	382																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
61	64	67	70	349	352	355	358	361	364	367	374	377	380	383																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
62	65	68	71	350	353	356	359	362	365	368	375	378	381	384																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
63	66	69	72	351	354	357	360	363	366	369	376	379	382	385																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
64	67	70	73	352	355	358	361	364	367	370	377	380	383	386																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
65	68	71	74	353	356	359	362	365	368	371	378	381	384	387																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
66	69	72	75	354	357	360	363	366	369	372	379	382	385	388																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
67	70	73	76	355	358	361	364	367	370	373	380	383	386	389																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
68	71	74	77	356	359	362	365	368	371	374	381	384	387	390																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
69	72	75	78	357	360	363	366	369	372	375	382	385	388	391																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
70	73	76	79	358	361	364	367	370	373	376	383	386	389	392																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
71	74	77	80	359	362	365	368	371	374	377	384	387	390	393																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
72	75	78	81	360	363	366	369	372	375	378	385	388	391	394																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
73	76	79	82	361	364	367	370	373	376	379	386	389	392	395																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
74	77	80	83	362	365	368	371	374	377	380	387	390	393	396																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
75	78	81	84	363	366	369	372	375	378	381	388	391	394	397																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
76	79	82	85	364	367	370	373	376	379	382	389	392	395	398																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
77	80	83	86	365	368	371	374	377	380	383	390	393	396	399																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
78	81	84	87	366	369	372	375	378	381	384	391	394	397	400																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
79	82	85	88	367	370	373	376	379	382	385	392	395	398	401																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
80	83	86	89	368	371	374	377	380	383	386	393	396	399	402																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
81	84	87	90	369	372	375	378	381	384	387	394	397	400	403																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
82	85	88	91	370	373	376	379	382	385	388	395	398	401	404																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
83	86	89	92	371	374	377	380	383	386	389	396	399	402	405																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
84	87	90	93	372	375	378	381	384	387	390	397	400	403	406																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
85	88	91	94	373	376	379	382	385	388	391	398	401	404	407																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
86	89	92	95	374	377	380	383	386	389	392	399	402	405	408																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
87	90	93	96	375	378	381	384	387	390	393	400	403	406	409																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
88	91	94	97	376	379	382	385	388	391	394	401	404	407	410																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
89	92	95	98	377	380	383	386	389	392	395	402	405	408	411																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
90	93	96	99	378	381	384	387	390	393	396	403	406	409	412																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
91	94	97	100	379	382	385	388	391	394	397	404	407	410	413																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
92	95	98	101	380	383	386	389	392	395	398	405	408	411	414																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
93	96	99	102	381	384	387	390	393	396	399	406	409	412	415																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
94	97	100	103	382	385	388	391	394	397	400	407	410	413	416																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
95	98	101	104	383	386	389	392	395	398	401	408	411	414	417																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
96	99	102	105	384	387	390	393	396	399	402	409	412	415	418																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
97	100	103	106	385	388	391	394	397	400	403	410	413	416	419																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
98	101	104	107	386	389	392	395	398	401	404	411	414	417	420																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
99	102	105	108	387	390	393	396	399	402	405	412	415	418	421																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
100	103	106	109	388	391	394	397	400	403	406	413	416	419	422																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
101	104	107	110	389	392	395	398	401	404	407	414	417	420	423																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
102	105	108	111	390	393	396	399	402	405	408	415	418	421	424																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
103	106	109	112	391	394	397	400	403	406	409	416	419	422	425																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
104	107	110	113	392	395	398	401	404	407	410	417	420	423	426																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
105	108	111	114	393	396	399	402	405	408	411	418	421	424	427																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
106	109	112	115	394	397	400	403	406	409	412	419	422	425	428																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
107	110	113	116	395	398	401	404	407	410	413	420	423	426	429																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
108	111	114	117	396	399	402	405	408	411	414	421	424	427	430																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
109	112	115	118	397	400	403	406	409	412	415	422	425	428	431																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
110	113	116	119	398	401	404	407	410	413	416	423	426	429	432																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
111	114	117	120	399	402	405	408	411	414	417	424	427	430	433																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
112	115	118	121	400	403	406	409	412	415	418	425	428	431	434																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
113	116	119	122	401	404	407	410	413	416	419	426	429	432	435																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
114	117	120	123	402	405	408	411	414	417	420	427	430	433	436																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
115	118	121	124	403	406	409	412	415	418	421	428	431	434	437																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
116	119	122	125	404	407	410	413	416	419	422	429	432	435	438																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
117	120	123	126	405	408	411	414	417	420	423	430	433	436	439																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
118	121	124	127	406	409	412	415	418	421	424	431	434	437	440																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
119	122	125	128	407	410	413	416	419	422	425	432	435	438	441																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
120	123	126																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

USE THESE CARDS

The cards below are postpaid for your convenience in requesting product information, catalogs, and literature from advertisers and firms listed in this issue.

AMERICAN SCHOOL BOARD JOURNAL

BUSINESS REPLY MAIL

First Class Permit No. 1112, Milwaukee 1, Wis.

BUSINESS REPLY MAIL

First Class Permit No. 1112, Milwaukee 1, Wis.



READER'S SERVICE SECTION

(Continued)

Code No.	Page No.	Code No.	Page No.
231	Metabol Equipment Corp..... Laboratory furniture	8	NEWS OF PRODUCTS FOR THE SCHOOLS
232	Minneapolis Honeywell Regulator Co.ins. set. 8 & 13 Pneumatic controls		01 Inland Steel Products Co..... Insulated Roof Deck
233	Monroe Company, The..... Folding tables and chairs	76	02 Language Training Aids..... Laboratory Booths
234	Owens Illinois: Kimble Glass Co. Sub. Glass block	6 & 7	03 Penco Metal Products Div., Alan Wood Steel Co..... Wire Baskets & Racks
235	Peterson & Co., Leonard..... Science laboratory furniture	60	04 Irwin Seating Co..... Rigid Desk Tops
236	Pittsburgh-Des Moines Steel Co. Steel deck grandstands	57	05 Ditto, Inc. Office Duplicator
237	Premier Engraving Company..... Engravers	76	06 Von Duprin Div., Vonnegut Hardware Co. Fire & Panic Locks
238	Royal Typewriter Company, Inc., Div. Royal McBee Corp..... Electric typewriters	63	07 Hand-Genic Specialty Co..... Chalk Holder
239	Safeway Steel Products, Inc..... Telescoping gym seats	2	08 Howe Folding Furniture, Inc..... Vinyl Table Tops
240	Sheldon Equipment Co., E. H. Science room furniture	3rd cover	09 Minnesota Mining & Manufacturing Company Microfilm Copier
241	Southern California Plastering Institute	5	010 Greflex, Inc. Slide Projector
242	Stromberg Time Corporation..... Electronic time and program systems	75	011 Remington Rand Div., Sperry Rand Corp. Electric Calculator
243	Strong Electric Corp..... Spotlights	68	012 Singer Sewing Machine Co..... Portable Sewing Machine
244	Torjessen, Inc. Folding partitions	78	013 Fred Medart Products, Inc. Bleacher Control Unit
245	Vacuum Can Co..... Vacuum insulated carrier-dispensers	72	014 Safe-Lock, Inc. Projector Stand
246	Virco Manufacturing Corp. ims. set. 57 & 60 School furniture	57 & 60	015 Delta Products Div., Air Accessories, Inc. Catalog
247	Vogel-Peterson Co., Inc. Coat and hat racks	78	016 Southern Pine Association. Booklet
			017 Keweenaw Mfg. Co. Booklet
			018 Cleaver-Brooks. Booklet
			019 Audio-Visual Commission on Public Information Booklet

MILWAUKEE 1, WISCONSIN

P.O. Box No. 2068

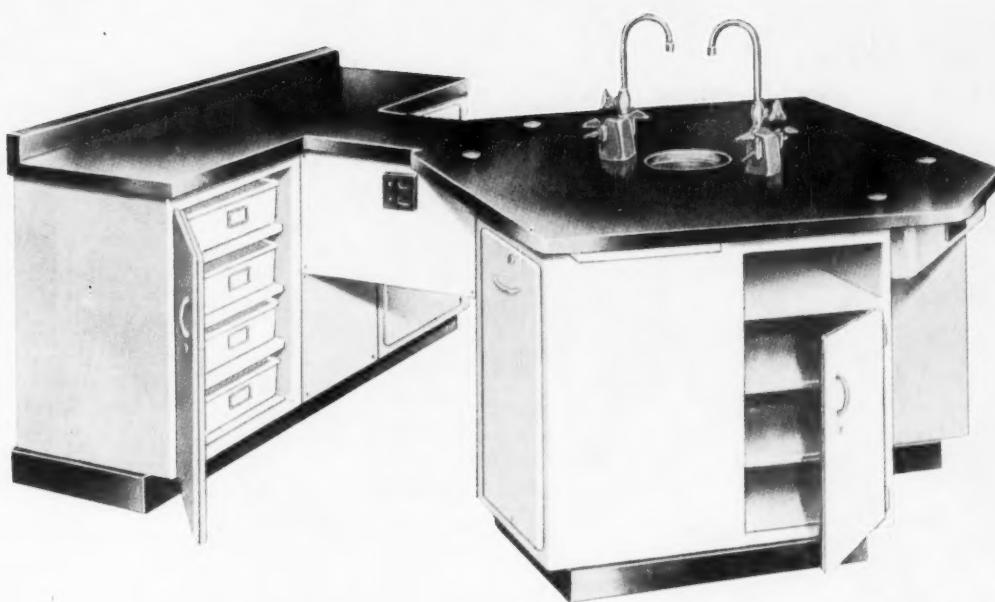
MILWAUKEE 1, WISCONSIN

HAVE "EDUCATIONALLY CORRECT"

Science Rooms

WITH

Sheldon



S-5100 SERIES PHYSICS TABLE

One of several tables in Sheldon's Total Experience Science Program. Tables, storage cases, and other furniture in the complete program provide for student activities in a wide range of sciences — store apparatus and materials at point of use — reduce preparation time — save steps—enable instructors and students alike to accomplish more. This is the program that is up-dating science education in schools throughout the United States. Write for complete information.

WRITE FOR LITERATURE ON "EDUCATIONALLY CORRECT" FACILITIES FOR

SCIENCE • JUNIOR SCIENCE • HOMEMAKING • ART • INDUSTRIAL ARTS • MUSIC

(For more information from advertisers, use the postcard on page 79)





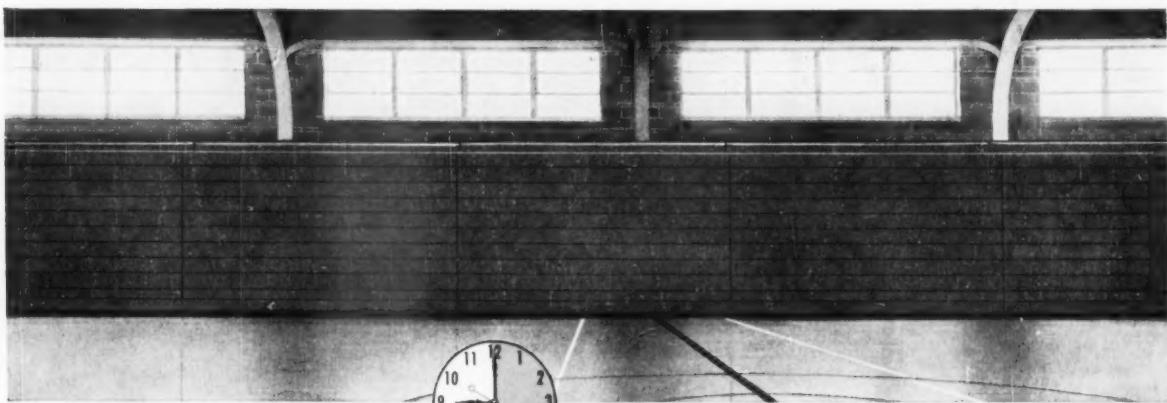
POWER OPERATION

makes sense in gym seats!



Crystal City High School
Crystal City, Missouri

Opens in seconds—at the turn of a key! No muscle power, no binding, no noise, no damage to seats, walls, floors. When all seat rows are not required, movement stops instantly by release of control key, with seats locked immovably in position. Movement stops automatically when seats are fully open or closed.



Medart Power Operation can be inexpensively installed on Medart Seats already in service.

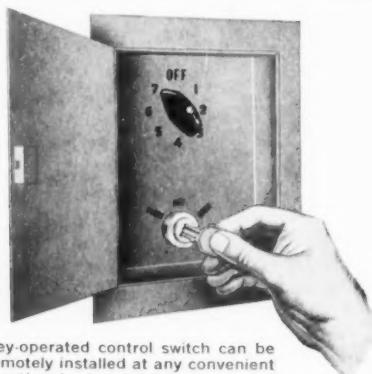


Closed in seconds—just as smoothly, quietly, safely as opening operation.

Medart Seats need no floor tracks, no extra wall reinforcements, no special construction provisions. Only regular 110-v. or 220-v. power source is required.

Cost? Just a fraction more than manually operated seats—and this is soon recovered through lower maintenance and service expense.

Write for catalog



Key-operated control switch can be remotely installed at any convenient location in gym which allows full visibility of seats.

MEDART

TELESCOPIC GYM SEATS

SPECIFY the best, then INSIST on it!



FRED MEDART PRODUCTS INC. • 3578 DE KALB STREET • ST. LOUIS 18, MISSOURI

(For more information from advertisers, use the postcard on page 79)